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A survey of nurse educators' knowledge, use, and perception of outcomes assessment

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A survey of nurse educators' knowledge, use, and perception of outcomes assessment

by

Beth Marie King

A Dissertation Submitted to the
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CHAPTER ONE

INTRODUCTION

> "Once upon a time in the land of Wonderland, a prestigious national commission declared that the state of health care in that country was abominable. There were so many unhealthy people walking around that the commission declared the nation at risk and called for sweeping reforms.
>
> In response, a major hospital decided to institute performance measures of patient outcomes and to tie decisions on patient dismissal as well as doctors' salaries to those measures. The most widely used instrument for assessing health in Wonderland was a simple tool that produced a single score with proven reliability. That instrument, called a thermometer, had the added advantage of being easy to administer and record....
>
> When the doctors discovered that their competence would be judged by how many of their patients had temperature as measured by the thermometer as normal or below, some complained that it was not a comprehensive measure of health. Their complaints were dismissed as defensive and self serving. The administrators, to insure that their efforts would not be subverted by recalcitrant doctors, then specified that subjective assessments of patient well-being would not be used in making decisions. Furthermore, any medicines or treatment tools not known to directly influence thermometer scores would no longer be purchased.
>
> After a year of operating under this new system, more patients were dismissed from the hospital with temperatures at or below normal.... Some years later, during the centennial Wonderland census, the census takers discovered that the population had declined dramatically and that mortality rates had increased. As people in Wonderland were wont to do, they shook their heads and sighed, Curiouser and curiouser" (Darling-Hammond, 1984, p. 57).

This metaphor mirrors the current movement of assessing student outcomes in higher education. As the metaphor implies, "the availability of a good thermometer does not produce health" (Keith, 1991, p. 16).

Similarly in higher education, neither an excellent faculty/student ratio nor the number of books in the library imply that learning has occurred.

Since the mid-eighties, concerns regarding the quality and accountability of institutions of higher education have been voiced by faculty members (Boyer, 1987; Astin, 1985); major educational reports, Integrity in the College Curriculum (Association of American Colleges, 1985), Involvement in Learning (National Institute of Higher Education, 1984), Nation at Risk (National Commission on Excellence in Education, 1983), Educational Outcomes: Assessment of Quality -State of the Art and Future Directions (Hart & Waltz, Eds., 1988); politicians, Time for Results: The Governors 1991 Report on Education (National Governors' Association, 1986) and the public.

Thomas Kean, current president of Drexel University and former governor of New Jersey, in an address to the New Jersey higher education community during his gubernatorial term, succinctly described the overall concern regarding higher education: "You have promised...that your graduates will have the knowledge and abilities to be productive in their work--a prerequisite not only of national strength but individual fulfillment. Maybe you never said those promises aloud. But we heard them nevertheless.... Your critics say that higher education promises much and delivers too little.... The public wants you to prove the critics wrong: You can" (1987, p. 10,11). Henceforth, assessing the outcomes of higher education has become a national interest.

These criticisms have not gone unnoticed by state and federal legislators, nor by educational accrediting bodies. Requirements for

data regarding the outcomes of higher education have been mandated by many state legislators and state oversight boards. In addition, the U.S. Department of Education and the Council on Postsecondary Accreditation (COPA) are requiring colleges and universities to incorporate outcomes assessment in their accrediting process. The rationale for the inclusion of outcomes as part of the accreditation process was best articulated by COPA, "Because accreditation remains the primary and only permanent process within the educational community for assessing and improving educational quality, the accreditation process will directly aid the institutions and programs if it can effectively articulate the role of outcomes assessment in promoting institutional and educational effectiveness" (cited by Lenburg, 1990, p. 29).

As a direct result of this accreditation focus, in 1991 the National League for Nursing (NLN), the recognized accrediting agency for nursing education, added outcomes criteria as part of their accreditation process. Baccalaureate nursing programs are now required to assess the following five outcomes criteria: critical thinking, communication, therapeutic nursing interventions, graduation rates, and employment rates. In addition, two of eight optional outcomes oriented criteria must also be evaluated. The eight optional criteria are program satisfaction, professional development, personal development, attainment of credentials, organization of work environment, scholarship, service, and nursing unit defined.

Concurrent with the outcomes movement, nursing education has been undergoing curricular reform which focuses on caring. The concept of care

is "becoming a central and major focus of nursing education and practice" (Leininger, 1990, p. 5). Morse, Bottorff, Neander, & Solberg (1991) concurred with this statement but pointed out that "if caring is really the essence of nursing then it must be demonstrated and not simply proclaimed. If caring is the central dominant and identifying feature of nursing then it must be relevant to practice and to the patient and not merely an internalized feeling on the part of the nurse" (p. 119).

These two movements, outcomes assessment and curricular reform which focus on caring, along with the profession's sense of accountability to the public are forcing nurse educators to examine the outcome of nursing education, not only in terms of technical competence, but in terms of the demonstration of caring by nursing students.

Need for the Study

Garbin (1991, p. xiii) has challenged nurse educators to "apply the principles of outcomes assessment to better assure that the graduates of nursing education programs will be the caring, competent, and accountable nurses intended by the program and needed by the public". To do this, nurse educators will benefit from a basic understanding of what factors led to the outcomes movement as well what is meant by outcomes assessment.

A review of the literature revealed numerous articles regarding outcomes assessment. The majority of the articles focused on general overviews of the topic (Marchese, 1987; Hutchings & Marchese, 1990), case studies of how to conduct an assessment (Banta & Moffett, 1987; Conrad,

1987), and surveys of the progress made by colleges and universities regarding student outcomes assessment (Paulson, 1990; Ewell, 1990). Unfortunately, the literature lacks consensus regarding the terminology and definitions of outcomes assessment, let alone the "whats and hows" of outcomes assessment (Davis, 1989).

The majority of nursing education studies related to outcomes have focused on predicting the success of students in nursing programs and passage of the national nursing licensure exam (Felts, 1986; McKinney, Small, O'Dell, & Coonrod, 1988; Dell & Valine, 1990). Only recently has the focus turned to measuring educational effectiveness rather than educational predictors (Marquis & Worth, 1992). Both fields, higher education and nursing, have limited research regarding the use of the assessment data by faculty and virtually no articles were found in terms of the faculty's perception and knowledge of the outcomes assessment movement (Dennison & Bunda, 1989).

The challenge to produce caring, competent, accountable nurses has always been a concern of nurse educators. As with the definitional problems relating to outcomes assessment in general, nursing literature lacks consensus as to the definitions of care, caring, and nursing care (Morse, Solberg, Neander, Bottorff, & Johnson, 1990). Despite these problems, nursing education has begun to integrate caring in the curriculum (Leininger, 1990, Bauer, 1990; Bevis & Watson, 1989). However, the literature reveals little if any research in the area of assessment of caring as an outcome in nursing programs. As a result, the question

remains as to how nurse educators will know they are producing caring nurses.

Purpose of the Study

There are several purposes to this descriptive study. The first is to determine nurse educators' level of knowledge regarding the antecedents which have led to the outcomes assessment movement in higher education. The second purpose is to elicit from nurse educators their knowledge of outcomes assessment and their usage of such information, and finally to acquire insights from nurse educators concerning their methods of assessing "caring" as exhibited by nursing students.

Problem Statement

The two current movements in nursing education, outcomes assessment and curricular reform which focuses on caring, are the driving forces behind this study. Before these two movements can be fully implemented nurse educators will benefit from having an understanding of the factors which acted as antecedents to the outcomes movement as well as the current status of the movement today. Therefore, this study will examine the current status of the outcomes movement and the specific outcome of caring in nursing programs. The problem statement to be addressed by this study is: What is the knowledge base and perception of nurse educators regarding outcomes assessment, and how will nurse educators assess the outcome of "caring" in nursing students?

Research Questions

The following research questions address the purpose of the study:

1. What is the knowledge level of nursing educators regarding the outcomes assessment movement in higher education?
2. What data are utilized to assess the outcome of nursing education in baccalaureate nursing programs nationwide?
3. How do nurse educators use the information obtained from outcomes assessment?
4. How is the outcome of caring by nursing students assessed in baccalaureate nursing programs?
5. What are the perceptions of nurse educators regarding the outcomes assessment movement in nursing education?

Background Information

Two concepts, evaluation frameworks and outcomes assessment, serve as the foundation of the conceptual framework for this study. Evaluation frameworks are currently used to provide the structure for academic programs to assess their quality and worth. Outcomes assessment has arisen out of the concern by the public, educators, and state legislators for accountability by colleges and universities.

The following discussion will first offer a definition of evaluation frameworks and outcomes assessment. Secondly, the evolution of evaluation frameworks and their intent as they relate to higher education will be presented. Thirdly, the evaluation framework most frequently used by higher education, the accreditation model, will be outlined. Finally,

the incorporation of outcomes assessment as part of the accreditation process will be presented.

Evaluation frameworks incorporate the concepts of evaluation and assessment together to form a structure within which one can assess the quality and worth of an educational program. The concept of evaluation in education can be defined as "the formal determination of the quality, effectiveness, or value of a program, product, project, process, object, or curriculum" (Worthen & Sanders, 1987, p. 22). Whereas, assessment in education is defined as "any process of gathering concrete evidence about the impact and functioning of undergraduate education" (Boyer & Ewell, 1988, p. 4).

As to the concept of outcomes assessment, Boyer and Ewell (1988) defined the term as "the assessment of the results of undergraduate education" (p. 5). Mayhew and Simmons (1990) defined outcomes assessment as "a process by which evidence for congruence between an institution's stated mission, goals and objectives, and the actual outcomes of its program and activities, is assembled and analyzed in order to improve teaching and learning" (p. 376). Another definition offered by Banta (1988) defined outcomes assessment as "collecting evidence of (1) student performance on specified measures of development, (2) program strength and weakness, and (3) institutional effectiveness" (p. 1). The definitions infer that outcomes assessment can be used as an evaluation framework by itself or combined with other frameworks to assess colleges and universities.

Sarnecky (1990) offered an historical review of the evolution of

evaluation frameworks. The first generation of evaluation frameworks focused on measurement and testing, more of a technical approach. The second generation utilized a Tylerian approach and examined curriculum in relation to predetermined objectives. A judgment role characterized the third generation of evaluation frameworks and finally, the fourth generation was considered a responsive model and was concerned with the individuals and institutions involved in the evaluation.

Marchese (1987) focused specifically on evaluation frameworks which utilized assessment as their major intent. He provided an excellent review of six approaches to assessment of student learning. The first approach, the assessment center was described as "a process (not place) aimed originally at problems of personnel selection" (p. 4). This assessment utilized direct observation in a variety of situations in order to assess a person's abilities. The second approach, assessment of learning, did not focus on selection but rather on how assessment helps students learn. The third assessment framework was program monitoring. The focus of this approach was the entire program as opposed to the individual student. Assessing students learning and growth was the fourth framework. This approach focused on the students development and how the college experience changed the individual. The fifth assessment approach, standardized testing, helped institutions evaluate their own programs against the norms of other students. The final approach, the senior exam, has been used since early education in the United States and is currently called a capstone experience. This experience requires

students to synthesize their undergraduate learning and experiences in response to specific questions.

Another approach to examining the intent of evaluation frameworks was offered by Talbott and Church (1988). They reviewed a variety of evaluation frameworks and their approach to assessing quality. The first framework, evaluation by professional judgment, was based on the belief that the best judge of worth is an expert in that arena. The second framework, evaluation by measurement, was based upon the assumption that the area of study can be measured and that instruments are available for measurement. This framework based quality on the product produced. Evaluating the congruence between performance and objectives was the third framework discussed. Quality was based upon the success or failure in meeting the objectives. Goal-free/responsive evaluation was the fourth framework. This framework examined the actual outcome regardless of its goals. In the fifth classification, Talbott and Church discussed other ways of assessing quality. They included: (a) value added assessment, or actual and inferred changes in student's performance over time, (b) resources as indicators of quality, and (c) unobtrusive measures of quality such as physical traces, archives, and observation.

The evaluation framework most frequently utilized by higher education including nursing education for the last decade has been the accreditation model. The general purpose of accreditation is to "establish standards, and to evaluate and improve education quality" (Dinham, 1989, p. 2). Despite the fact that there are about 50 accrediting agencies in higher education, the process for accreditation is similar for all of

them: a self-study report addressing published accrediting standards is prepared, a peer review is completed, and an on-site visit by a team of experts in the field being accredited is performed (Hagerty & Stark, 1989). Astin (1987) has been an ardent critic of this framework because resources and reputation were used as a gauge of quality. In addition, this model has been criticized for the absence of data demonstrating relationships between accreditation standards and educational outcomes (Hagerty & Stark, 1989 and Dinham, 1989). Recently, accrediting bodies have responded by including outcomes assessment as part of the accreditation process.

One of the critical choices that has faced educators when using outcomes assessment has been what to assess. Boyer and Ewell (1988) have provided the most concrete answer to this dilemma. They believe that "cognitive, skill, or attitudinal outcomes, postgraduate behavior such as job or graduate school placement or performance" can be used to evaluate an institutions effectiveness in student learning (p. 5). Astin (1987) argues that the assessment of these behaviors depends far more on the quality of the student rather than the program or institution. He further argues that if the competency level of an entering student is not known, college and universities cannot take credit for their competence at graduation. Instead, he believes that a student's development over a period of time should be utilized as the measure of a college/universities effectiveness.

Another issue relating to a framework which utilizes outcomes assessment has been what to do with the data gathered from an outcomes

assessment program. Halpern (1987) has identified three usages. The first, program improvement, encourages the use of information to improve faculty teaching in an effort to increase student retention and satisfaction. Gate keeping, the second use, ensures the basic academic competence of all graduates. One final use of outcomes assessment information is for budget decision making and accountability.

In summary, the concepts of evaluation frameworks and outcomes assessment are clearly interrelated with the current concern for effectiveness in higher education. The current movement of including outcomes assessment as part of the evaluation framework for colleges and universities focuses the intent of evaluation where it should be: on the effectiveness of teaching by faculty and the learning of students.

Assumptions

The assumptions used for this study are as follows:

1. Respondents completing the questionnaire will have some knowledge of the two current movements in nursing education: outcomes assessment and the curriculum reform which focuses on caring.
2. Respondents to the questionnaire will provide accurate information which reflects their knowledge and perception of the outcomes movement.
3. Most nurse educators value the concept of caring and believe that nursing students should demonstrate caring behavior.

Limitations of the Study

The limitations to this study are as follows:

1. This study will be limited to baccalaureate nursing programs ac-

credited by the National League of Nursing.

2. The questionnaire will be completed by the curriculum chairs or Deans, Chairpersons, or Heads of the nursing program and may not reflect the knowledge level/perception of the overall nursing faculty.

Definitions

The following conceptual definitions assist in understanding the terminology used throughout the study:

1. Assessment: "Any process of gathering concrete evidence about the impact and functioning of undergraduate education. The term can be applied to processes that provide information about individual students, about curricula or programs, about institutions or about entire systems of institutions. The term encompasses a range of procedures including testing, survey methods, performance measures or feedback to individual students, resulting in both quantitative and qualitative information" (Boyer & Ewell, 1988, p. 4).
2. Caring Behaviors: Behaviors which can be viewed as caring as demonstrated by the (a) art of nursing or the expressive interpersonal acts of nursing, (b) values and attitudes toward others, (c) action component of nursing, (d) knowledge base of nursing, (e) phenomenon of care or understanding of people's ways of caring (Symanski, 1990).
3. Evaluation: "In education, it is the formal determination of the quality, effectiveness, or value of a program, product, project, process, objective, or curriculum" (Worthen & Sanders, 1987, p. 22).

4. National Education Reports: Several reports acted as antecedents to the outcomes movement. The reports were the Nation at Risk (National Commission on Excellence in Education, 1983); Involvement in Learning (National Institute of Higher Education, 1984); Integrity in the College Curriculum (Association of American Colleges, 1985); Educational Outcomes: Assessment of Quality-State of the Art and Future Directions (Hart & Waltz, Eds., 1988).
5. Outcomes Assessment: "Assessment of the results of undergraduate education. Can include cognitive, skill or attitudinal outcomes, postgraduate behavior such as job or graduate school placement or performance, or more general impacts on a community, region or society" (Boyer & Ewell, 1988, p. 5).
6. Regional Accrediting Associations: Six regional bodies exist and are responsible for accrediting colleges and universities. The six associations are: the New England Association of Schools and Colleges, the Middle States Association of Colleges and Schools, the Southern Association of Colleges and Schools, the North Central Association of Colleges and Schools, the Northwest Association of Schools and Colleges, and the Western Association of Schools and Colleges (Harcleroad, 1981).

The following operational definitions assist in understanding the terminology used throughout the study:

1. Outcomes Assessment: Data obtained through the questionnaire reflecting the knowledge and perception of the outcomes assessment movement and descriptions of their own institutional and nursing

programs implementation of outcomes.

2. Outcome of Caring: Data obtained through the questionnaire reflecting the assessment and evaluation of caring behaviors by nursing students.

CHAPTER TWO

REVIEW OF THE LITERATURE

The literature review will discuss the antecedents that have led to the outcomes assessment movement, outcomes assessment in higher education and nursing education, and outcomes related to caring behavior.

Outcomes Assessment: Antecedents

The antecedents which led to the outcomes assessment movement in higher education can be classified into three areas: major educational reports, national and state legislative involvement, and changes in accreditation requirements. Without an understanding of these antecedents nurse educators have a limited framework within which to evaluate the emerging requirement to assess student outcomes.

The first major educational report which had an impact on the outcomes assessment movement was the Nation at Risk report (National Commission on Excellence in Education, 1983). This report examined the state of education at the elementary and secondary level. Several deficiencies were found, and as a result all 50 states imposed standardized testing at several points during the elementary and secondary grades (Marchese, 1987). The questionable status of education at the elementary and secondary level caused speculation about the quality of higher education.

Another report, Involvement in Learning (National Institute of Higher Education, 1984) which was funded by the National Institute of Education recommended that a "systematic program to assess knowledge and

skills developed by students in academic programs" be implemented (Woodard et al., 1988, p. 1). This report "asserts that achieving excellence in higher education will require that institutions produce demonstratable improvements in student knowledge, capacities, skills and attitudes between entrance and graduation" (Steele, 1989, p. 357). Steele (1989) further implied that this study acted as the impetus for William Bennett, the Education Secretary, "to call for colleges to either assess their programs and publish their results or lose federal funds (p. 357). A third report, Integrity in the College Curriculum (Association of American Colleges, 1985) by the Association of American Colleges, found it "scandalous that colleges failed to assess the impacts of their teaching" (Hutchings & Marchese, 1990, p. 16).

In nursing education, the Accreditation Outcomes Project published in Educational Outcomes: Assessment of Quality-State of the Art and Future Directions (Hart & Waltz, 1988) was funded by the Helene Fuld Health Trust and implemented by the National League of Nursing (NLN), acted as a major antecedent for the inclusion of outcomes criteria as part of the NLN accreditation process. The purpose of this descriptive study was the identification of outcome criteria which could be used as part of the national accreditation of nursing programs. Nursing programs nation wide were surveyed and asked to identify student outcomes which were currently being assessed as well as what should be assessed in the future. As a result, in 1991 the NLN added outcomes criteria to their accreditation process. The following five criteria must be addressed by all baccalaureate nursing programs: critical thinking, communication,

therapeutic nursing interventions, graduation rates, and patterns of employment. In addition, two of the following eight criteria must be assessed: program satisfaction, professional development, personal development, attainment of credentials, organization or work environment, scholarship, service, and nursing unit defined (a mission relevant outcome).

Federal and state initiatives have also acted as antecedents to the current assessment movement. Ewell (1991) described three pieces of federal legislation which impacted the evaluation of outcomes. The first was the Ability to Benefit legislation which sets specific levels of minimum performance on specified tests for admission into postsecondary study by students that do not have a high school diploma. The second piece of legislation, the Student Right to Know Law, which passed in 1991, requires that "all postsecondary institutions disclose to potential students their persistence and graduation rates" (p. 16). The third initiative which developed out of the National Goals for Education, was a "national performance-based assessment of the ability of graduating college seniors to think critically, communicate effectively, and solve problems" (p. 16).

The states have also become active in the assessment movement in higher education. At the National Governors' Task Force on College Quality in 1986, the chairman, Missouri Governor John Ashcroft stated "the public has a right to know and understand the quality of undergraduate education that young people receive from publicly funded college.... They have a right to know that their resources are being

wisely invested and committed.... We need not just more money for education, we need more education for the money" (Hutchings & Marchese, 1990, p. 16). As the economy worsened, effective spending for education became more of an issue with the public (Ewell, 1988).

Currently, Ewell (1990) reports that "the majority of assessment activities occurring at American colleges and universities is due to state initiatives" (p. 1). In addition, over half of the institutions responding to a national survey on this topic claimed that their primary motivation was an existing or anticipated mandate.

Accrediting agencies have also responded to the call for accountability and quality in higher education. In 1988, the Department of Education issued rules requiring documentation of student academic achievement (Thrash, 1990). As a result, the Commission on Institution of Higher Education, a voluntary organization which is committed to public certification of educational quality and institutional integrity, adopted a statement on assessment and student academic achievement (Thrash, 1990). Institutions are expected to describe plans for evaluating effectiveness in the self-study.

Currently, all accrediting associations require evidence of student achievement as a part of their institutional or program review (Marchese, 1990). The Southern Association of Colleges and Schools was one of the first accrediting agencies which established standards for institutional effectiveness. The North Central Association requires institutions to examine a broad range of institutional outcomes, "but it must have and describe a program by which it documents student academic achievement"

(Mather, 1991, p. 397). And as discussed earlier, The National League for Nursing, the accrediting agency for schools and colleges of nursing recently added outcomes criteria as one component of their accrediting standards.

Outcomes Assessment: Research in Higher Education

Research in the field of higher education regarding outcomes assessment can be divided into three areas: informational type surveys, outcomes assessment measurement tools, and the implementation of an outcomes assessment plan.

Paulson (1990) surveyed the chief academic officers of state governing or coordinating boards of all 50 states regarding their state's official policy as to assessment and outcomes measurement in higher education. The questionnaire collected the following data: origins of the assessment initiative including a description, the primary purpose of the assessment, whether or not common data or test results were collected, whether institutions were required to report to the state their assessment programs, and whether state funds were used to initiate assessment programs. All 50 states responded as well as the District of Columbia and Puerto Rico. The responses indicated that 27 states had identifiable assessment initiatives consisting of legislation or board policy, 12 encourage assessment activities, and that eight states had no assessment initiative planned. Ewell, Finney, and Lenth (1990) reviewed the results of Paulson's survey and concluded that although no two states were approaching outcomes assessment the same way, the majority of the

states view assessment as a means for institutional improvement or curricular revitalization. They also determined that statewide mandated assessment instruments were rare and that only six of the 27 formal state initiatives reported having a funding base for continued assessment.

A nationwide study by Woodard, Hyman, von Destinon, and Jamison (1991) surveyed 1140 chief student affairs officers, whose institutions were members of the National Association of Student Personnel Administrators, regarding their involvement in the development and implementation of assessment programs in their institution. The main purpose of the study was to determine whether assessment programs had been developed, the objectives and source of these initiatives and the assessment techniques being used. The questionnaire focused on four areas: demographic information about the institution, questions regarding the status and implementation of their student outcome program/plan, a section asking whether the institution would want to be listed as a resource, and an optional section which asked for information regarding what was assessed and how it was assessed. Results of the questionnaire (return rate of 72%, N=821) indicated that institutions were beginning to respond to the concern about quality in higher education by implementing outcomes assessment programs. There were 174 institutions with plans, 489 had no plans, and 145 were developing plans. The results also indicated that there were no significant differences between public and private institutions, nor size of the institution.

Research regarding instruments used to measure outcomes was found in the literature. Jacobi, Astin, and Ayala (1987) provided a succinct

overview of more than 25 cognitive assessment instruments, but they point out that the "best instrument is one that most closely matches the goals and values of the institution and the structure of its curriculum" (p. 37). Their review categorized instruments into general education tests, specific skills tests, and subject matter competency tests and divided them according to their target population. For example, general education tests which measured cognitive abilities associated with core curricula or general education programs, included instruments such as CLEP tests, ACT Academic Tests, Graduate Record Exam, Academic Profile, and the ACT College Outcomes Measures Project. Specific skills tests which focus on a single ability included tests such as College Board English Composition Test with essay, Miller Analogies Test, and the Watson-Glaser Critical Thinking Appraisal test. The final category, subject matter competency tests which measured knowledge and skills associated with specific disciplines, included tests such as the GRE subject tests and ACT Proficiency Examination Program.

Banta and Pike (1989) studied two outcomes assessment instruments, the College Outcomes Measures Program (COMP) exam developed by the American College Testing Program and the Academic Profile developed by the Educational Testing Service. They had faculty and students at the University of Tennessee-Knoxville compare the two tests for use in assessing the effectiveness of their institutions' general education program. A content analysis by faculty revealed that neither test measured more than 30% of the stated goals for general education. Forty-eight percent of the students who completed the COMP exam and 43%

of the students who completed the Academic Profile rated the exams as satisfactory, good, or excellent as a measure of general education or skill. Banta and Pike concluded that "faculty interested in evaluating their programs need criterion referenced tests constructed according to detailed specifications to assess congruence with faculty goal for student development" (p. 467).

Steele (1989) also discussed the use of the COMP tool when measuring student outcomes. He reported that although almost 450 institutions utilized the COMP tool to assess student growth and level of achievement, the majority of them have not published their results since the information was for internal use only. Six case studies of colleges and universities and their experience with the COMP tool were also presented.

Several case studies have been published regarding colleges' and universities' experience in implementing outcomes assessment programs. Banta (1985) described the development of an outcomes assessment program at the University of Tennessee, Knoxville (UTK) which arose out of the financial incentive offered by the Tennessee Higher Education Commission. In 1981, academic performance criteria were utilized to supplement funding of state colleges and universities. Eligibility for the performance funding was based on five standards of quality: the percentage of programs eligible for accreditation that were accredited; the percentage of programs that have undergone peer review or have administered a comprehensive exam to majors within a five year period; results of the ACT COMP exam; results of opinion surveys regarding the

quality of academic programs; and the implementation of plans for improvements.

UTK's outcomes assessment program addressed the areas of achievement in general education, achievement in the major field, and opinions concerning academic quality and services. Task forces for each outcome area were organized and asked to determine assessment measures for each area. The ACT COMP test was selected to measure achievement in general education, the majority of the disciplines chose to utilize national standardized tests to assess achievement in the major field, and a survey designed specifically for UTK was used to gather opinions regarding academic quality and services. Although the principal use of the outcomes information has been to qualify for performance funding, changes have been made by faculty and administration as a result of the outcomes information.

In a similar study, Conrad et al. (1987) provided a description of the implementation of an assessment program at the University of Arizona. Improvement of student and institutional performance were the primary purpose of the assessment program. Conrad proposed that outcomes assessment examine three areas: general/liberal education, the major, and the extracurriculum. In addition to the outcomes model of assessment, this university utilized the value added approach which examines the effect the institutional environment has had on student learning and development.

Outcomes Assessment: Research in Nursing

Evaluation has long been a major component of nursing education. Both the National League for Nursing and State Boards of Nursing require evaluation as part of their accreditation/approval process. Most recently, the issue of accountability to the public has led to the need for institutions to be accountable to students for a quality education and to society for competent nurses (Felts, 1986). Unfortunately, the majority of educational outcome studies have focused on predicting the success of students in programs of nursing and passage of the national/state licensure examination (NCLEX). The following discussion illustrates this point.

The literature indicated that cognitive measures such as ACT and SAT scores, GPA, and nursing achievement tests were strong predictors for success in nursing programs. Felts (1986) studied 297 associate degree graduates. She concluded that the ACT composite score was the best admission criteria predictor for success in nursing, whereas the performance in college courses predicted success on the national licensure exam. McKinney, Small, O'Dell, and Coonrod (1988) also attempted to identify factors which would predict success on the national licensing exam. Results of this study indicated that the best predictors for success on the exam were the cumulative college GPA, Mosby Assess test results, pre-entrance tests scores, GPAs on prenursing and nursing theory, and clinical GPA. Whitley and Chadwick (1986) examined 176 subjects and found that graduates who entered the nursing program with low SAT scores, low cumulative and science GPAs and who scored below the

mean on nursing exams were at risk for failing the national licensing exam.

Krupa, Quick, and Whitley (1988) studied the question of whether grades in nursing courses could predict success on the NCLEX exam. The sample consisted of 384 students who graduated from a baccalaureate nursing program and had taken the national licensing exam in 1985. A discriminant analysis revealed that grades in an introductory course in nursing and a medical surgical nursing course were the main predictors of success on the NCLEX exam. Clinical grades were poor predictors of success on the exam.

Some studies have attempted to examine noncognitive factors which might affect success in nursing programs. Dell and Valine (1990) examined GPA, SAT and ACT scores, self-esteem and age in an attempt to explain the difference in results on the national licensing exam of 78 subjects. Multiple regression analysis found that the GPA accounted for 58% of the variance and that self esteem did not contribute much to the variance. Predictors such as role strain, age, exit GPA and ACT composite scores of associate degree nurses were examined by Leininger (1990). She found that the exit GPA and ACT scores were best predictors for success on the national licensing exam.

The current challenge in nursing is to measure educational effectiveness rather than educational predictors. Hechenberger (1988) and Strickland and Waltz (1988) both argue that educational outcome studies in nursing are underrepresented.

One of the first nursing studies to examine student outcomes was

funded by the NLN and conducted by Hart & Waltz (1988). This study gathered data regarding: (1) student outcomes which were currently being assessed by nursing programs, (2) outcomes which should be assessed, (3) how student outcomes should be measured, and (4) how programs should utilize the results of the measurement of student outcomes. A questionnaire was mailed to 1,585 deans, directors of all diploma, associate, baccalaureate and masters programs in the United States.

The questionnaire contained six sections; Section One obtained information regarding the institutions characteristics, such as type of program, student enrollment, faculty size, financial support and characteristics of the setting. Section Two collected information about which student outcomes were currently being evaluated and which were considered the most important. This section contained a list of 45 student outcomes which were prominent in the nursing literature, respondents were asked to identify outcomes currently being assessed and to prioritize them in terms of ability to determine program effectiveness. Section Three presented a list of measurement tools and asked respondents to select those currently used. Section Four examined the methodological approach to measuring student outcomes and the reliability and validity of tools used. Section Five examined the utilization of outcome findings and Section Six was an open ended section in which respondents were given the opportunity to make comments.

The questionnaire was returned by 716 (45%) of the schools, of which 161 were from baccalaureate programs, 130 from diploma programs, 225 from associate degree programs, 45 from associate degree/BSN programs, 136

from master's programs, and 19 other. The findings indicated that the primary outcome being assessed was academic achievement, nursing care plans, and implementation of a care plan. Caring behavior was selected by 57.3% of the respondents as an outcome evaluated. The least frequent outcome measurements were self-concept, self-esteem, moral reasoning, social support, creativity, and computer knowledge. In terms of what outcomes should be assessed, cognitive and performance outcomes were selected by the majority of the respondents with affective outcomes the least.

A recent study by Marquis and Worth (1992) utilized six factors to assess effectiveness of nursing education at California State University, Chico School of Nursing. Three internal measures were considered: GPA in nursing courses, GPA in nonnursing courses, and faculty rating in clinical evaluation. Three external factors; licensure exam scores, competency rating scale rated by the graduate, and competency rating by the graduate's immediate supervisor were also considered. Questionnaires were mailed to 120 alumni and 120 supervisors with a response by 70 alumni and 73 supervisors. The findings indicated that the graduates, faculty, and employers all held differing views about the effectiveness of the program. There was no correlation between academic standing and perceived competency in nursing practice nor alumni and supervisors' ratings.

Finally, a study by Monahan (1991) specifically examined the learning outcomes of the clinical experience in nursing. An accidental sample of 16 baccalaureate nursing students was randomly divided into two

groups. One group received the traditional clinical experience along with supporting theory, the other group only received the theory component of the course. At the beginning and end of the course both groups of students were given several measurement tools to measure their clinical nursing judgment and learning and development. The author concluded that the clinical experience did not contribute to nursing judgment or to the development of professional identity. This significant finding indicated that nursing education may need to examine the number of clinical hours attributed to learning.

Outcomes Assessment: Caring in Nursing Education

The concept of care is "becoming a central and major focus of nursing education and practice" (Leininger, 1990, p. 5). Caring has been long recognized as a major component of nursing practice and Morse, Solberg, Neander, and Bottorff (1990) report that "caring is an essential component of a good nurse" (p. 9). Halldorsdottir (1990) further states that "the primary aim of every educational institution and effort must be the maintenance and enhancement of caring" (p. 96). The National League of Nursing concurred with these statements and in 1990 passed a resolution which encouraged a change in faculty-student relationships that enhanced caring practices and curriculums which identified caring as a core value (Tanner, 1990). Stein (1986) pointed out that "if the educational setting is thought of as the ideal, should not a caring faculty be one of its essential elements? (p. 4).

Unfortunately, nursing literature is abundant with narrative articles

about caring. However, research studies as it relates to caring have been minimal. More specifically, this researcher did not find any research addressing the assessment of caring as an outcome of nursing students. The following discussion indicates the extent to which caring on a general basis has been studied in nursing education.

Slevin and Harter (1987) in a nation wide study examined whether nurses were taught caring in baccalaureate nursing education. A questionnaire was sent to the deans/directors of 450 NLN accredited baccalaureate nursing programs. The questionnaire asked whether caring was taught in the curriculum, if so how, and how was it evaluated. In addition, faculty caring skills were questioned in terms of what tools were used to evaluate faculty caring skills. Of the 273 programs responding, 97.4% indicated that caring was addressed in the curriculum, 70.7% reported that it was integrated throughout the curriculum, 18.1% identified caring as a component of another major concept, 6.3% related caring as a major concept, and 2.2% as an organizing concept. Only 2.6% of the programs reported that caring was not addressed.

Caring was taught most frequently in the senior year (39.9%) followed by 39.8% in the junior year. Minimal focus was found in the sophomore (16.7%) or freshman year (3.6%). The care content was most frequently taught in an integrated manner (33.4%), followed by acute care (15.3%), mental health (13.8%), maternal child (12.7%), and finally long term care (12.7%). The number of hours teaching the concept in the programs was also evaluated; 227 programs reported spending over 15 hours, 22 reported spending 10-14 hours, 61 spent 5-9 hours, and 67

reported spending 1-4 hours. Seven programs indicated that they spent no time teaching the care concept. Another component which was evaluated was how caring was taught. Results were: client interactions (90.6%), discussion groups (86.9%), lectures (80.9%), assigned readings (79.4%), and process recordings (73.8%).

Caring was evaluated in both the classroom (87%) and clinical setting (94.8%). The results of the survey indicated that pencil and paper tests were used most frequently (66.5%), followed by assigned papers (19.1%), case studies (11.2%), process recordings (11.2%), other (9.8%), nursing care plans (9.3%) and seminars (7.9%). The least used items were role playing (2.8%), self-evaluation (3.7%), and logs/journals (4.7%). Twenty-eight schools reported no evaluation of caring in the classroom. The clinical performance evaluation criteria most frequently used to evaluate caring in the clinical setting (58.5%). Other reported evaluation tools utilized were: observation (25.3%), nursing care plans (22.7%), process recordings (17%), clinical conferences (13.5%), and nursing process recordings (9.6%). Other tools identified were: logs and journals (8.7%), written papers (7%), self evaluation (3.9), anecdotal notes (3.5%), client reporting (3.5%), clinical personnel (2.6%), and peer evaluation (2.2%). Twelve programs reported that they had no clinical evaluation of caring skills. Finally, 69.2% of the programs did not specifically evaluate faculty caring skills. Those who did used student evaluation tools, peer evaluation, evaluation by the dean, and self-evaluation.

A study by Bauer (1990) examined the caring concepts and experiences

in the curriculums of five baccalaureate nursing programs. All five were NLN accredited and used caring as a central theme in their program's conceptual framework. Data were collected from written documents as well as interviews. Caring content themes were identified as follows: content labeled as caring, caring about self and others, holistic care, attributes of caring, skills emphasizing caring component, nursing process, research on caring, scope of nurse caring role. Results of the study indicated that the following strategies were used to teach and learn caring: lecture and discussion, post conferences, seminars, small group exercises and activities, case studies, roleplays, critical analysis techniques, films and videotapes of situations, testing over caring content, and clinical evaluation of caring behaviors. Faculty behavior was also identified as a major strength for teaching caring, specifically, instilling feelings of self-worth in students, being available, stating performance expectations and setting limits, being sensitive to student needs, providing positive and negative feedback, providing encouragement and support, demonstrating a prevailing belief that one cannot teach caring if one really doesn't display caring. The study concluded by suggesting that the following were outcomes of caring and teaching caring behaviors: the nurse feeling a sense of satisfaction and reward, clients feeling better as a result of caring behaviors, caring behaviors which promoted reciprocal reaction between the client and nurse, and students internalizing caring values and transferring these behaviors to practice settings.

Forsyth, Delaney, Maloney, Kubesh, and Story (1989) presented a case

study of one baccalaureate nursing program and the implementation of a caring curriculum. Evaluation of caring was completed through student self evaluation, faculty evaluation, and attainment of terminal and level objectives. Student development of caring behaviors were primarily evaluated in the clinical setting through the use of a clinical performance tool. The tool identified specific critical behaviors of caring behavior and in order to pass the clinical portion of a course students had to demonstrate these critical behaviors.

Finally, a study by Halldorsdottir (1990) examined caring and uncaring encounters with a teacher from the perspective of a student. Content analysis of caring encounters between faculty and students brought forth the following four themes: a sense of acceptance and self-worth, personal and professional growth and motivation, appreciation and role modeling, and long-term gratitude and respect. Uncaring encounters were characterized by lack of professional competence, lack of concern, demand for control and power, and destructive behavior.

Summary

The review of higher education literature indicated that outcomes assessment is no longer a trend but is here to stay. Accrediting agencies have taken the initiative to require evidence of student achievement as part of the accrediting process; states have implemented legislation to require assessment of student learning; and faculty and administrations of colleges and universities are now accepting the value of outcomes assessment and are using the results to enhance their

curriculums, relieve budgetary constraints, and improve their teaching.

In the past, the majority of outcome studies in nursing education have focused on selecting criteria which would predict the success of students in nursing programs and passage of the national licensing exam. The current challenge in nursing education is to measure educational effectiveness rather than predictors of success. The implementation of outcomes criteria by the National League for Nursing as part of the accreditation process should enhance this type of measurement.

Although caring has long been considered an inherent component of nursing, nursing education is just now beginning to formally introduce the concept in the curriculum. As a result caring outcomes have not been researched extensively, even though the Waltz study in 1988 found that 48.9% of the respondents thought caring behavior was an important student outcome to measure in the future.

In summary, the review of the literature has presented the current status of research in the area of outcomes in both higher education and nursing literature. Unfortunately, there is a lack of research regarding the knowledge level of nurse educators as to outcomes assessment generally, as well as the specific outcome of caring. This study will attempt to add to the body of literature.

CHAPTER THREE

METHODS AND PROCEDURES

Both outcomes assessment and caring are relatively new terms to higher education and nursing education. Without an understanding of how these terms have arisen in the field, nurse educators are limited in their ability to implement an outcomes assessment plan, let alone assess the outcome of caring. Thus, the impetus for this study. The following discussion will describe the procedures for the implementation of the study.

Research Design

A survey design was selected for this study since the main purpose was to describe nurse educator's knowledge base and perception of the outcomes movement and the current status of the outcome "caring" in nursing programs.

The main advantage of this design is the flexibility and broadness of scope. Surveys can be applied to many populations and used for many purposes, in addition, the information gained can be voluminous (Polit & Hungler, 1978). The main disadvantage to this methodology is that the data gathered cannot be used to establish cause and effect since experimental controls are not utilized in this design (Polit & Hungler, 1978).

Population and Sample

The population for this study consisted of the curriculum chairpersons or deans, chairpersons, or heads of the nursing program of all 542

NLN accredited baccalaureate nursing programs in the United States. The programs were identified through the 1991-1992 official listing of baccalaureate and master's degree programs in nursing published by the National League of Nursing. Programs were located in all 50 states as well as the District of Columbia, Puerto Rico, and the Virgin Islands. Iowa was selected as the state for the pilot study and was not included in the 542 programs surveyed. The criterion, NLN accreditation, was selected because the NLN is recognized as the "designated accrediting agency for standard-setting and evaluation of all educational nursing programs in nursing and is recognized as such by the NCA and the U.S. Office of Education" (Yura, 1986, p. 153).

Of the 542 NLN programs surveyed, 400 programs returned questionnaires, resulting in a 73.8% response rate. In addition, eleven surveys were returned after the completion of the data analysis, five programs responded but did not answer the questionnaire due to time restraints and/or policy restrictions. Four surveys were returned due to incorrect information providing a total 77.49% response.

Instrument

The survey instrument utilized in this study was a questionnaire which was developed by the researcher. Since a pretested questionnaire which would specifically address the purpose of this study was not found, the review of the literature provided the foundation for the development of the questions included in the survey. The survey developed by Woodard et al. (1988) and Hart and Waltz's (1988) study provided insights as to

appropriate questions to ask regarding outcomes assessment in general. In addition, Bauer's (1990) study of caring curriculums contained a survey which was utilized to develop questions addressing the outcome of caring in nursing students. Faculty in the Professional Studies in Education program at Iowa State University and nurse educators at Grand View College also provided feedback regarding the questionnaire.

A pilot study of the questionnaire was conducted by sending a copy of the cover letter as well as the questionnaire to the deans and chairpersons of all 15 baccalaureate nursing programs located in Iowa. The cover letter directed the chairpersons to complete the questionnaire and make suggestions for improvement. Twelve programs responded and based upon their recommendations the following changes were made in the survey: (1) the directions for completing the section on institutional plan was revised, (2) the directions for the timing of assessments were rewritten, (3) the respondents were asked to prioritize the use of the results of outcomes assessment, (4) the order of the conceptual frameworks were clarified, and (5) the questionnaire was condensed to a small pamphlet format.

The cover letter (Appendix) was developed in order to explain the purpose and significance of the study to nursing education. The letter also explained why curriculum chairs were selected as the target population. Finally, the letter acted as a thank you to the respondents for their participation in the study.

The questionnaire (Appendix) was divided into five sections: (1) demographic information regarding the college and university, the nursing

program and the respondent; (2) information regarding the respondent's knowledge of the student outcomes assessment movement; (3) information regarding the institution's outcome assessment program, as well as the nursing program's outcome assessment plan; (4) information regarding the assessment of the outcome of caring by nursing programs, and (5) the respondents' perception of the outcomes assessment and caring movements. At the beginning of each section, directions were given regarding completion. The respondents were asked to check the response which represented their institution, program, or knowledge of the question asked.

Sections I and II requested information regarding the respondent's knowledge of the outcomes assessment movement in general, and more specifically at their institution and program. Four questions examined the respondents general knowledge of the outcomes assessment movement, six questions addressed the institutions outcomes assessment program, and seven questions pertained to the nursing's program outcomes assessment plan. The review of the literature inferred that nurse educators had minimal knowledge or research in the area of outcomes assessment (Hechenberger, 1988; Strickland & Waltz, 1988).

The next group of questions, addressed the area of caring as an outcome in nursing programs. Five questions were developed to gather data regarding the program's method of assessing care as an outcome in nursing students and caring behaviors measured.

Section IV contained five questions which were developed to collect data regarding the nurse educators' perception of the outcomes movement

in higher education and the caring movement in nursing. A Likert Scale of 1-5 with 1 indicating strongly disagree and 5 indicating strongly agree was used to answer these questions.

The final twelve questions of the questionnaire were developed to gain demographic information regarding the institution and the nursing program. Questions regarding the size and location of the institution, as well as the type of curriculum, were asked since these variables might influence the nurse educators' knowledge and perception of the outcomes assessment movement. Included in this demographic section were five questions which gathered data about the respondent: their position, number of years in nursing education, number of years in their position of curriculum chair or program chair, number of years at that institution, and highest educational degree earned. Such information was necessary since knowledge and perception can be influenced by both educational preparation and time in and institution or practice area.

Grand View College nursing faculty were asked to review the questionnaire to provide face validity. These individuals were selected since they are undergoing the NLN accreditation process and had to address the outcomes criteria standard. In addition, the current movement to establish care as a core concept in nursing curriculums had been discussed by the faculty.

Procedure

A cover letter (Appendix) along with the questionnaire (Appendix) were sent to the chairperson, dean, or head of the nursing program at 542

NLN baccalaureate nursing programs on April 14, 1992. The cover letter requested that the questionnaire be completed by the curriculum chair of the nursing program, or if unavailable, by the chairperson of the nursing program. Also included in the cover letter was a statement of the purpose of the study, a statement regarding the confidentiality of responses, the names of the professors supervising the study, as well as the investigator's name and phone number. In order to enhance the number of returned questionnaires, a stamped self-addressed envelope was also included in the mailing.

The respondents were asked to complete the questionnaire by April 30th, 1992. On May 1, 1992, a postcard (Appendix) reminding the respondent of the questionnaire and the importance of the study were sent to all 542 programs. On May 12, 1992 a second letter (Appendix) with an identical questionnaire was sent to 247 programs. The deans and/or chairpersons were asked to return the questionnaire by May 22, 1992. A total of 400 questionnaires were received by June 15, 1992, representing a 73.8% return rate.

Analysis

The demographic data gathered were analyzed by frequencies and percentages to determine the characteristics of the sample. Since the majority of the data obtained from questions relating to knowledge of outcomes and caring was nominal, data analysis consisted of frequencies, percentages, and the nonparametric test of chi-squares. Chi-square analysis was used to test the independence between demographic variables

and the respondents' knowledge of the outcomes movement and the type of assessment data collected. During chi-square analysis, cells were collapsed when more than 20% of the cells had less than 5 frequencies. Ranked data were obtained from the questions referring to the use of outcomes assessment data. The ranked responses were weighted in order to obtain the overall primary use of the outcomes assessment data. Weighted scores were obtained by multiplying each use by their priority, totalling those numbers, and dividing by the total numbers prioritized. Interval data were obtained from the six questions related to the perception/ opinion of the respondent. For these questions, analysis consisted of t-tests and one-way analysis of variances. The alpha level for hypothesis testing was set at .05.

Rights of Human Subjects

The study was approved by the researcher's program of study committee and the Iowa State Human Subjects in Research Committee. The cover letter assured respondents of confidentiality and asked for voluntary participation only. The questionnaire was coded for the purpose of follow-up. All questionnaires were kept in a locked filing cabinet, available only to the researcher. At the completion of the study, all questionnaires will be destroyed.

CHAPTER FOUR

FINDINGS

The data analysis results are reported in this chapter. First, demographic data regarding the sample will be presented, followed by a discussion of the data and findings of each research question. Since the majority of the data were nominal, data analysis consisted of frequencies, percentages and inferential tests which were nonparametric in nature. Six questions related to the perception/opinion of the respondent provided interval data and for these questions the analysis consisted of t-tests and one-way analysis of variances.

Descriptive Findings

Description of Sample

The population for this study consisted of 542 baccalaureate nursing programs. The questionnaire was sent to all programs listed by the National League of Nursing as accredited baccalaureate programs. Completed surveys were returned from 400 programs, resulting in a response rate of 73.8%. In addition, eleven surveys were obtained after the completion of the data analysis, five programs responded but did not complete the questionnaire and four surveys were returned due to incorrect information. Therefore a total response request resulted in a 77.49% return.

All 49 states surveyed including the District of Columbia, the Virgin Islands and Puerto Rico were represented in the survey. In

addition, respondents were located in all six regional accrediting areas. The state of Iowa was not included in the final survey since nursing programs in that state were utilized for the pilot study. Over one-half of the respondents were public colleges or universities with enrollments of full and part-time students ranging from under 1,000 to over 30,000 (Table 1).

Table 2 provides demographic information from responding nursing programs. The most frequent type of nursing program was from generic programs with B.S.N. completion tracks, followed by generic programs with B.S.N. completion and graduate tracks. The majority of the nursing programs had enrollments in their generic nursing programs of over 150 students. Students entered the nursing programs at various times with 21.5% entering as freshman, 33.0% as sophomores, and 26.2% as juniors. The conceptual frameworks which were utilized by the respondents curricula can be found in Table 2. Several respondents selected more than one framework and as a result, the three conceptual frameworks selected most frequently were integrated, general systems, and other (respondents were given the opportunity to write in conceptual frameworks not identified). Finally, 92 (23%) of the nursing programs were undergoing NLN accreditation during the 1992-1993 academic year.

Of the respondents that answered the survey, 238 (59.5%) identified themselves as the Chairperson, Dean, or Head of the nursing program and 108 (27%) identified themselves as the curriculum chair. Those responding to other 48 (12%), most frequently described themselves as assistant or associate deans, faculty, chair or member of evaluation or assessment

Table 1

Demographic Information: Frequencies and Percentages of Responding Institutions

Characteristic	Frequency	Percentage
Type of Institution	N	%
Public	203	50.75
Private	172	43.00
Other	21	5.25
Missing	4	1.00
Total	400	100.00
Enrollments (Full & Part-time)		
Under 1,000	44	11.00
1,000 to 2,499	90	22.50
2,500 to 4,999	58	14.50
5,000 to 9,999	74	18.50
10,000 to 19,999	73	18.25
20,000 to 30,000	29	7.25
Over 30,000	26	6.50
Missing	6	1.50
Total	400	100.00
Regional Accrediting Associations		
New England Assoc.	31	7.75
Middle States Assoc.	80	20.00
Southern Assoc.	93	23.25
North Central Assoc.	143	35.75
Northwest Assoc.	20	5.00
Western Assoc.	24	6.00
Missing	9	2.25
Total	400	100.00

Table 2

Demographic Information: Frequencies and Percentages of Responding Nursing Programs

Characteristic	Frequency	Percentage
Type of Nursing Program	N	%
Associate & Generic	18	4.50
Generic Only	16	4.00
Generic & BSN Completion	152	38.00
BSN Completion Only	46	11.50
External Degree	2	.50
Generic & Graduate	15	3.75
BSN Completion & Graduate	23	5.75
Generic, BSN Completion & Graduate	112	28.00
Other/Missing	16	4.00
Total	400	100.00
Undergraduate Enrollment		
Under 50	12	3.00
51 to 75	30	7.50
76 to 100	60	15.00
100 to 149	73	18.25
Over 150	183	45.75
Missing	42	10.55
Total	400	100.00
Conceptual Frameworks		
Adaptation	78	13.71
General Systems	108	18.98
Developmental	48	8.44
Integrated	113	19.86
Competency Based	16	2.81
Caring	74	13.01
Other	122	21.44
Missing	10	1.76
Total	569[a]	100.00

[a]Total may exceed 400 since respondents selected more than one conceptual framework.

committees and B.S.N. coordinators. The number of years the respondents had held their positions ranged from less than one year to over ten years, but 135 (33.7%) indicated one to three years. Longevity appears to be a characteristic of nurse educators since 351 (87.7%) had been nurse educators for over ten years and 176 (44%) had been employed by the same institution for over ten years. In terms of the respondents educational background, 297 (74.2%) held doctorates of which 94 (31.5%) were doctorates in nursing (Table 3).

Inferential Findings

This study investigated the knowledge, use, and perception of the outcomes assessment movement, as well as the assessment of caring as an outcome by nursing students. Five major research questions were examined. The findings for each major question along with related hypotheses are presented, followed by a summary of the findings.

Research Question #1

What is the knowledge level of nurse educators regarding the outcomes movement in higher education?

This survey examined knowledge in terms of the respondents' familiarity with the overall outcomes movement, antecedents leading up to the movement, as well as awareness of the state/regional and institutional requirements related to outcomes assessment. In addition, information was obtained regarding the information sources respondents considered most helpful in learning about outcomes assessment.

Table 3

Frequencies and Percentages of Nurse Educators Position, Years in Position, Years as a Nurse Educator, and Years Employed by Current Institution

Characteristic	Frequency	Percentage
Position	N	%
Chair, Dean, Head of Program	238	59.50
Chair Curriculum Committee	108	27.00
Other	48	12.00
Missing	6	1.50
Total	400	100.00
Number of Years in Position		
Less than one Year	53	13.25
One to Three Years	135	33.75
Four to Seven Years	95	23.75
Seven to Ten Years	39	9.75
Over ten years	30	7.50
Missing	48	12.00
Total	400	100.00
Degree		
Masters in Nursing	85	21.25
Masters other	5	1.25
Doctorate in Nursing	94	23.50
Doctorate other	203	50.75
Other	8	2.00
Missing	5	1.25
Total	400	100.00

Table 3 (continued)

Characteristic	Frequency	Percentage
Years as Nurse Educator		
One to Three Years	1	.25
Four to Seven Years	12	3.00
Seven to Ten Years	31	7.75
Over Ten Years	351	87.75
Missing	5	1.25
Total	400	100.00
Years Employed by Current Institution		
Less than One Year	10	2.50
One to Three Years	53	13.25
Four to Seven Years	87	21.75
Seven to Ten Years	69	17.25
Over Ten Years	176	44.00
Missing	5	1.25
Total	400	100.00

The first question in the survey examined the respondents familiarity with the outcomes assessment movement. Ninety-seven percent (388) of the respondents indicated that they were familiar with the movement. The information sources which were selected as most helpful in learning about outcomes assessment were as follows: nursing education literature (222), higher education literature (198), and workshops (114). In addition, 81 respondents indicated other resources as helpful, primarily the National League of Nursing. In terms of familiarity with the national education reports which acted as antecedents to the outcomes assessment movement, the majority (92%) were familiar with the NLN's

Accreditation Outcomes Project, but only 44.7% were familiar with the Nation at Risk report, 18.2% with the Integrity in the Curriculum report, and 9.2% with the Involvement in Learning report.

Knowledge of state agencies and regional accrediting association requirements regarding outcomes assessment varied. For example, 16.5% of the respondents did not know if their regional accrediting association required institutions to have an outcomes assessment plan (Table 4). Furthermore, respondents from the same state did not agree as to the requirement for outcomes assessment by state or regional accrediting associations (Tables 5 & 6). In actuality, 27 of the states require institutions of higher education to have an outcomes assessment and all of the regional accrediting associations require institutions to develop outcome assessment plans. Therefore, 149 (37.25%) of the respondents were unclear about regional accrediting association requirements and many were unclear about state agency requirements.

Of the 400 institutions responding, 150 (37.2%) had a student outcomes plan in place, 149 (37.2%) were developing one and only 91 (22.7%) were not developing a plan. For 149 of the institutions with plans or in the process of developing one, the plans had existed for less than two years. In terms of outcomes assessed, the majority of the plans included assessment of general education and major/specialization outcomes. Only 29.7% of the plans assessed student development outcomes. Although most of the respondents knew who was responsible for assessing student outcomes, 10.7% reported that there was no committee or office responsible for coordinating and evaluating their outcomes assessment

Table 4

Frequencies and Percentages of Responses from Nurse Educators Regarding State and Regional Accrediting Association Requirements of an Outcome Assessment Plan

Characteristic	Frequency	Percentage
State Requires Plan	N	%
Yes	142	35.50
No	189	47.25
Do Not Know	62	15.50
Missing	7	1.75
Total	400	100.00
Regional Accrediting Association Requires Plan		
Yes	241	60.25
No	83	20.75
Do Not Know	66	16.50
Missing	10	2.50
Total	400	100.00

Table 5

State Comparison of Nurse Educators: Frequencies and Percentages of Responses to Question: Does your state have a plan which requires institutions to have a student outcomes assessment plan?

State	Yes	No	Do Not Know	Requires Plan[a]
	N	N	N	
Alabama	3	8	0	Yes
Alaska	1	0	0	No
Arizona				Yes
Arkansas	2	2	0	Yes
California	9	8	2	No
Colorado	3	0	0	Yes
Connecticut	1	3	0	No
Delaware	0	2	0	No
District of Columbia	0	1	1	No
Florida	2	3	1	Yes
Georgia	6	2	1	No
Hawaii	0	0	1	Yes
Idaho	2	0	0	Yes
Illinois	9	9	3	Yes
Indiana	0	7	4	No
Iowa	2	7	3	No
Kansas	2	4	0	Yes
Kentucky	1	2	1	Yes
Louisiana	1	4	0	Yes
Maine	0	3	0	No
Maryland	5	0	1	Yes
Massachusetts	2	7	4	No
Michigan	3	4	5	No
Minnesota	4	5	1	No
Mississippi	1	2	0	Yes
Missouri	5	2	2	Yes
Montana	1	1	0	No
Nebraska	0	5	3	No
Nevada	0	2	0	Yes
New Hampshire	0	2	0	Yes
New Jersey	7	4	0	Yes

[a]Based on results of Paulson's (1990) study.

Table 5 (continued)

State	Yes	No	Do Not Know	Requires Plan[a]
	N	N	N	
New Mexico	1	0	0	Yes
New York	5	11	3	Yes
North Carolina	5	4	0	Yes
North Dakota	1	2	0	No
Ohio	3	7	3	Yes
Oklahoma	4	3	1	No
Oregon	2	1	0	No
Pennsylvania	4	17	4	No
Puerto Rico	2	2	0	No
Rhode Island	1	1	0	Yes
South Carolina	5	1	0	Yes
South Dakota	0	2	0	Yes
Tennessee	4	5	2	Yes
Texas	6	2	3	Yes
Utah	1	3	0	Yes
Vermont	0	1	0	No
Virgin Islands	0	1	0	
Virginia	6	0	3	Yes
Washington	2	4	4	No
West Virginia	0	2	4	No
Wisconsin	5	7	0	Yes
Wyoming				No
Total	122	168	57	

[a]Based on results of Paulson's (1990) study.

Table 6

Frequencies and Percentages of Regional Comparison of Nurse Educators Responses to Question: Does your regional accrediting agency require a student outcomes assessment plan?

Regional Association	Yes		No		Do Not Know	
	N	%	N	%	N	%
New England Assoc.	12	5.30	7	8.90	11	16.70
Middle States Assoc.	41	18.00	23	29.10	12	18.00
Southern Assoc.	63	27.60	16	20.20	14	21.00
North Central Assoc.	98	43.00	23	29.10	19	28.00
Northwest Assoc.	11	4.80	4	5.10	5	7.00
Western Assoc.	3	1.30	6	7.60	5	7.00
Total	228	100.00	79	100.00	66	100.00

program. In addition, only 33.7% of the respondents indicated that faculty received a copy of the results of the college or universities student outcomes assessment (Table 7).

The following hypotheses were generated from the research question which examined the knowledge level of nurse educators regarding outcomes assessment. Since the data analyzed were nominal, chi-square analysis was used.

Hypothesis 1a

Is the respondents' familiarity with the outcomes assessment movement in higher education independent of the variables: type of institution, location of the accrediting regional agency, size of

Table 7

Characteristics of the Outcome Assessment Plans: Frequencies and Percentages of Responding Institutions

Characteristic	Frequency	Percentage
Time Plan in Place	N	%
Less than One Year	77	32.63
One to Two Years	72	30.51
Three to Five Years	65	27.54
Do Not Know	22	9.32
Total	236	100.00
Outcomes Assessed		
General Education	174	34.18
Major/Specialization	188	36.94
Student Development	116	22.79
Do Not Know	15	2.95
Other	16	3.14
Total	509[a]	100.00
Faculty Receives Results		
Yes	135	56.25
No	64	26.67
Do Not Know	41	17.08
Total	240	100.00

[a] Total N may add up to more than 400 since respondents selected more than one category.

institution, type of nursing program, size of nursing program, and type of conceptual framework?

Chi-square testing yielded nonsignificant results for all of the above variables, thus the null hypothesis was retained. A low cell frequency was found in all of the variables, which in part was due to 98% of the respondents reporting familiarity with the assessment movement.

Hypothesis 1b

Is the respondents choice of information source which was most helpful in learning about the outcomes assessment movement independent of the position of respondent, number of years respondent has served as curriculum chair or dean of program, years as a nurse educator, degree of respondent, and program undergoing NLN accreditation next year?

Applying the chi-square test of independence, the selection of higher education literature as most helpful was found to be dependent upon the following variables: respondents' position, number of years respondent had served as chair of the curriculum committee or department, number of years as nurse educator, and program undergoing NLN accreditation next year. Both the selection of higher education and nursing education literature as sources most helpful in learning about outcomes assessment were found to be dependent upon the respondents degree (Table 8).

Table 8

Frequencies and Chi-square Analysis of Nurse Educators Selection of Helpful Resources and Variables: Position, Years Curriculum Chair, Program Undergoing NLN Accreditation, Degree, and Years as Nurse Educator

Higher Education Literature

Position	Yes	No	Total
Chair, Dean of Program	139	95	234
Chair Curriculum Comm.	37	67	104
Other	18	29	47
Total	194	191	385

$\chi^2 = 19.47$ df = 2 $p < .01$

Higher Education Literature

Years Chair of Nursing Program or Curriculum Comm.	Yes	No	Total
< 1 Year	11	40	51
1-3 Years	63	68	131
4-7 Years	59	35	94
7-10 Years	23	16	39
> 10 Years	18	12	30
Total	174	171	345

$\chi^2 = 25.24$ df = 4 $p < .01$

Higher Education Literature

Undergoing NLN Accreditation Next Year	Yes	No	Total
Yes	34	55	89
No	161	136	297
Total	195	191	386

$\chi^2 = 6.39$ df = 1 $p < .05$

Table 8 (continued)

Higher Education Literature			
Degree	Yes	No	Total
MS	33	53	86
Nsg. Ph.D.	41	52	93
Ph.D.	117	82	199
Missing	4	4	8
Total	195	191	386

$\chi^2 = 12.06$ df = 3 $p < .01$

Nursing Education Literature			
Degree	Yes	No	Total
MS	51	35	86
Nsg. Ph.D.	64	29	93
Ph.D.	100	99	199
Missing	5	3	8
Total	220	166	386

$\chi^2 = 9.28$ df = 3 $p < .05$

Higher Education Literature			
Years as a Nurse Educator	Yes	No	Total
1-10 Years	13	30	43
> 10 Years	182	161	343
Total	195	191	386

$\chi^2 = 7.07$ df = 1 $p < .01$

In terms of position, the Dean or Chair of the nursing program was more likely than expected to find higher education literature most helpful, whereas the curriculum chair was less likely than expected. Respondents that were a curriculum or nursing program chair and in that position for less than one year were found less likely than expected to find higher education literature most helpful, whereas those in the position four to seven years were found more likely than expected. Furthermore, those nurse educators with over ten years of experience were more likely than expected to select higher education as the source most helpful, and those under ten years less likely. In addition, programs that were undergoing NLN accreditation next year were found less likely than expected to find higher education literature more helpful versus those that were not.

Finally, the respondents with a Ph.D. in a field other than nursing were more likely than expected to find the higher education literature most helpful and less likely than expected to find the nursing education literature most helpful. Those with a nursing doctorate found the nursing education literature more helpful than expected. All other analyses were nonsignificant (Table 9).

Hypothesis 1c

Is the respondents choice of information source which was most helpful in learning about the outcomes assessment movement independent of their familiarity with the national education reports which acted as antecedents to the outcomes movement?

Table 9

Summary Table of Nonsignificant Chi-square Analysis Between Nurse Educators Selection of Helpful Resources and Variables: Years Employed by Program, Position, Years as a Nurse Educator, Years as Curriculum Chair or Program Chair, Degree, and Undergoing NLN Accreditation Next Year

Variable	χ^2	probability
	Higher Education Literature	
Years Employed in Program	.93	.91
	Nursing Education Literature	
Position of Respondent	.51	.77
Years Employed in Program	1.04	.90
Years as Nurse Educator	.90	.82
Years as Curriculum Chair or Program Chair	1.64	.80
NLN Accreditation Next Year	.18	.66
	Workshops	
Position of Respondent	.40	.81
Years Employed in Program	5.63	.22
Years as Curriculum Chair or Program Chair	1.20	.87
Years as Nurse Educator	1.30	.72
Degree of Respondent	6.69	.15
NLN Accreditation Next Year	.31	.57
	Other	
Position of Respondent	3.85	.14
Years Employed in Program	4.35	.36
Years as Curriculum Chair or Program Chair	7.85	.09
Years as Nurse Educator	6.69	.08
Degree of Respondent	2.84	.58
NLN Accreditation Next Year	.00	1.00

Chi-square analysis revealed that the selection of higher education literature as most helpful was dependent upon familiarity with the educational reports of Nation at Risk and Integrity in the Curriculum, whereas selection of nursing literature as most helpful was dependent upon familiarity with the Nation at Risk report and the NLN's Accreditation Outcomes Project (Table 10). Thus, the higher education literature was more likely than expected to be helpful to the respondent in becoming familiar with the educational reports of Nation at Risk and Integrity in the Curriculum whereas, nursing literature was less likely than expected to assist the respondent in becoming familiar with the Nation at Risk report but more likely than expected to assist the respondent in becoming familiar with the NLN's Accreditation Outcomes Project. Both higher education and nursing literature aided the respondent in becoming familiar with the Nation at Risk report. Table 11 presents non-significant results of chi-square analysis relating to nurse educators selection of helpful resources and major educational reports.

Research Question #2

What data are utilized to assess the outcome of nursing education in baccalaureate nursing programs nationwide?

This question examined the type of data used to assess students upon entering the nursing program, upon graduation, and following graduation. In addition, respondents were asked to select those outcomes criteria identified by the NLN that their nursing programs were evaluating or planned to evaluate in the future. Data analysis consisted of examining the frequencies of the responses.

The respondents were asked to select from a list of measurements

Table 10

Summary Table of Frequencies and Chi-square Analysis: Nurse Educators Selection of Helpful Resources and Major Educational Reports

	Nation at Risk		
Higher Education Literature	Yes	No	Total
Yes	120	73	193
No	57	128	185
Total	177	201	378

$\chi^2 = 36.07$ df = 1 $p < .01$

	Integrity in the Curriculum		
Higher Education Literature	Yes	No	Total
Yes	54	139	192
No	18	167	185
Total	72	306	378

$\chi^2 = 19.23$ df = 1 $p < .01$

	Nation at Risk		
Nursing Education Literature	Yes	No	Total
Yes	87	130	217
No	90	71	161
Total	177	201	378

$\chi^2 = 8.65$ df = 1 $p < .01$

	Accreditation Outcomes Project		
Nursing Education Literature	Yes	No	Total
Yes	213	4	217
No	149	12	161
Total	362	16	378

$\chi^2 = 5.85$ df = 1 $p < .05$

Table 11

Summary Table of Nonsignificant Chi-square Analysis: Nurse Educators Selection of Helpful Resources and Major Educational Reports

Variable	χ^2	probability
	Higher Education Literature	
Accreditation Outcomes Project	1.41	.23
Involvement in Learning	3.77	.05
	Nursing Education Literature	
Integrity in the Curriculum	.00	1.00
Involvement in Learning	2.75	.09
	Workshops	
Nation at Risk	.33	.56
Integrity in the Curriculum	.07	.78
Involvement in Learning	.04	.83
Outcomes Accreditation Project	3.35	.06
	Other	
Nation at Risk	.01	.90
Integrity in the Curriculum	.00	.95
Involvement in Learning	.00	.98[a]
Outcomes Accreditation Project	–	–[a]

[a]Twenty percent (20%) of cell frequencies are less than 5.

those which were used to assess their students upon entering into the nursing program, upon graduation, and following graduation. The majority of the programs selected more than one measurement for all three assessment periods. Assessment measurements used most frequently upon entry were college and high school GPA, followed by SAT and ACT scores (Table 12). Other measurements which were identified by the respondents as

Table 12

Frequencies and Percentages of Assessment Measurements Utilized by Nursing Programs to Assess Students Upon Entry into the Program

Measurement	Frequency	Percentage
Upon Entry	N	%
ACT scores	158	13.95
SAT scores	167	14.74
High School GPA	200	17.65
College GPA	316	27.89
Critical Thinking Tests	33	2.91
Student Interviews	106	9.36
Student Portfolios	61	5.38
Other	92	8.12
Total	1133[a]	100.00

[a]Respondents selected more than one measurement.

tools utilized to assess students upon entry can be found in Table 13. The timing of when students entered the nursing program was one factor which influenced the respondents' selection of assessment measures. For example, those nursing programs that enrolled students in their nursing programs their freshman year did not use college GPA as a measurement.

The survey also included a list of measurements used to assess students upon graduation from the program. Again the most frequently cited measurements were cognitive in nature; NCLEX scores, College GPA, and NLN exams (Table 14). Under the heading "other" respondents most frequently cited employer and student surveys (Table 15).

Table 13

Frequencies of Other Measurements Identified by Nurse Educators to Assess Students Upon Entry into Nursing Programs

Quantitative Measures	Frequency (N)
NLN Pre Admission Exam	5
NLN Mobility Profile II Exam	9
Math & English Exam	5
Net Exam	2
NLN RNEE	2
NLN exams	2
HS rank, Class rank	4
ACT PEP results	5
Grades/GPA	4
GRE Scores	1
Toffell Scores	1
Qualitative Measures	
Essay	7
Potential for Leadership/ Caring Qualities	1
References	8
Paper on Leadership	1
Interview	1
Moral Judgment	1
Self-Concept	1

Table 14

Frequencies and Percentages of Assessment Measurements Utilized by Nursing Programs Upon Graduation

Characteristic	Frequency	Percentage
Upon Graduation	N	%
College GPA	261	18.19
GRE scores	15	1.05
Miller Analogy	3	.21
Critical Thinking Tests	46	3.21
Student Interviews	70	4.88
NCLEX Scores	280	19.51
Acceptance Grad School	116	8.08
Institutional Exam	77	5.37
COMP Scores	30	2.09
MOSBY Exams	132	9.20
NLN Exams	218	15.19
Client Survey	79	5.51
Student Portfolio	35	2.44
Other	73	5.08
Total	1435[a]	100.00

[a]Respondents selected more than one measurement.

Table 15

Frequencies of Other Measurements Identified by Nurse Educators to Assess Students Upon Graduation

Characteristic	Frequency
Upon Graduation	N
Student Surveys	13
Employer Surveys	8
NLN Exams	6
State Board Exam	1
Participation in Professional and Community Services	1
Professional Development Tools	1
Attainment of Terminal Objectives	1

Analysis of assessment data following graduation revealed that alumni surveys (39.83%), employer surveys (38.83%), and acceptance in graduate school (19.80%) were the primary measurements. Only 14 (1.54%) of the respondents listed other measurements. The majority of the nursing programs (92.2%) collected data following graduation, with one and five years being the most frequent (Table 16).

Finally, the survey addressed the outcomes assessment component as part of the accreditation process by the NLN. Thirteen student outcomes criteria were identified based upon the 1987 Accreditation Outcomes Project. The NLN accreditation guideline for baccalaureate programs require that five of the thirteen criteria be evaluated along with two of the remaining eight. Of the five mandated criteria, none were selected 100% of the time by the respondents. The eight remaining criteria were

Table 16

Nursing Programs Timing of Assessments of Students and Graduates: Frequencies and Percentages

Timing	Frequency	Percentage
Upon Entry	242	27.88
Upon Graduation	257	29.61
Following Graduation	369	42.51
Total	868a	100.00
Following Graduation		
Six Months	59	10.28
One Year	265	46.17
Five Years	226	39.37
Ten Years	24	4.18
Total	574[a]	100.00

[a]Respondents selected more than one measurement.

all selected at varying frequencies (Table 17). Since the literature indicated that evaluation of the students' personal development was limited, respondents which selected this criterion were asked to describe how they measure a students' personal development. Their responses are in Table 18.

Hypothesis 2a

Is the type of data collected upon entry, graduation, and following graduation independent of the type of institution?

Analysis using the chi-square test indicated that the data collected upon entering nursing programs were not independent of the type of

Table 17

Frequencies and Percentages of NLN Criteria Selected by Nurse Educators for Evaluation Prior to Accreditation Visits

Criteria	Frequency	Percentage
	N	%
Required		
Critical Thinking	271	24.11
Communication	218	19.40
Therapeutic Nursing Int.	228	20.28
Graduation Rates	216	19.22
Employment Patterns	191	16.99
Total	1124[a]	100.00
Optional		
Program Satisfaction	254	29.03
Professional Development	168	19.20
Personal Development	70	8.00
Attainment of Credentials	108	12.34
Organization of Work Environment	17	1.94
Scholarship	113	12.91
Service	84	9.60
Nursing Unit Defined	61	6.98
Total	875[a]	100.00

[a]Respondents selected more than one criteria.

Table 18

Frequency of Responses by Nurse Educators to Question: For Those Who Selected Personal Development, How Will You Assess the Outcome?

Measurement	Frequency
Self Report	3
Group Discussion	1
Psychological Inventory	1
Portfolio	1
Student Life Assessment	1
Activities in Campus Life and Profession	4
Essay	1
Questionnaire	3
Interview	3

institution. More specifically, private schools were more likely to use ACT and SAT scores, high school GPAs, and student interviews than expected (Table 19, 20, 21, 22). No significant finding was found upon testing the independence of data collected upon graduation/following graduation and type of institution (Table 23). For this question the various types of institution were collapsed to two types, public and private.

Hypothesis 2b

Is the type of data collected upon entry, graduation, and following graduation independent of the number of students in the generic nursing program?

Table 19

Frequencies and Chi-square Analysis: Private vs. Public Institutions on use of ACT Scores as Assessment Data Upon Entry

	Type of Institution			
ACT Score	Public	Private	Unknown	Total
Yes	66	81	10	157
No	132	90	11	233
Total	198	171	21	390

$\chi^2 = 8.01$ df = 2 $p < .05$

Table 20

Frequencies and Chi-square Analysis: Private vs. Public Institutions on use of High School GPA as Assessment Data Upon Entry

	Type of Institution			
High School GPA	Public	Private	Unknown	Total
Yes	81	109	9	199
No	117	62	12	191
Total	198	171	21	390

$\chi^2 = 19.73$ df = 2 $p < .01$

Table 21

Frequencies and Chi-square Analysis: Private vs Public Institutions on use of Student Interviews as Assessment Data Upon Entry

	Type of Institution			
Student Interview	Public	Private	Unknown	Total
Yes	27	70	9	106
No	171	101	12	284
Total	198	171	21	390

$\chi^2 = 37.30$ df = 2 $p < .01$

Table 22

Frequencies and Chi-square Analysis: Private vs. Public Institutions on use of SAT Scores as Assessment Data Upon Entry

	Type of Institution			
SAT Scores	Public	Private	Unknown	Total
Yes	74	86	7	167
No	124	85	14	223
Total	198	171	21	390

$\chi^2 = 7.07$ df = 2 $p < .05$

Table 23

Summary Table of Chi-square Analysis Between Public and Private Institutions and Assessment Data Upon Entry, Upon Graduation, and Following Graduation: Nonsignificant Findings

Measurement	χ^2	probability
Upon Entry		
College GPA	1.82	.40[a]
Critical Thinking Tests	–	–[a]
Student Portfolio	3.27	.19
Other	1.10	.57
Upon Graduation		
College GPA	.54	.76
GRE Scores	.08	.95[a]
Miller Analogy Scores	–	–[a]
Critical Thinking Tests	1.19	.55
Student Interviews	4.67	.09
NCLEX Scores	4.61	.09
Acceptance in Grad. School	2.69	.25
Institutional Exams	1.59	.45
COMP Scores	.70	.70
Mosby Nursing Exams	3.88	.14
NLN Exams	2.40	.30
Client Surveys	1.40	.49
Student Portfolios	1.45	.48
Other	5.53	.06
Following Graduation		
Employer Survey	1.16	.55
Alumni Survey	.97	.61
Acceptance in Grad S	5.51	.06
Other	4.39	.11

[a]Cell frequency of zero after collapsing of cells.

Data analysis using chi-square testing yielded one significant finding for the data collected upon entry. Nursing programs with student enrollments of over 150 were less likely to utilize student interviews than those with enrollments under 150 (Table 24). Two significant findings were found for data collected upon graduation. First, programs with enrollments of over 150 were more likely than expected to use NCLEX scores and schools with enrollments between 1-75 were less likely. The second finding revealed that programs with enrollments of under 50 and 76-100 were more likely to use NLN exams as a measurement for assessment (Table 25) as opposed to other measurements listed in Table 26. The chi-square test of independence did not reveal any significant findings related to number of students and data collected following graduation.

Table 24

Frequencies and Chi-square Analysis: Size of Nursing Program and use of Student Interviews as Assessment Data Upon Entry

Number of Students Enrolled in Nursing Program	Student Interviews Yes	No	Total
Less than 50	6	6	12
51-75	12	18	30
76-100	17	43	60
100-149	24	49	73
Greater than 150	39	142	181
Total	98	258	356

$\chi^2 = 9.68$ df = 4 $p < .05$

Table 25

Frequencies and Chi-square Analysis: Size of Nursing Program and use of NCLEX Scores and NLN Exams as Assessment Data Upon Graduation

	NCLEX Scores		
Number of Students Enrolled in Nursing Program	Yes	No	Total
Less than 50	6	5	11
51-75	18	12	30
76-100	46	14	60
100-149	55	18	73
Greater than 150	150	31	181
Total	275	80	355

$\chi^2 = 11.79$ df = 4 $p < .05$

	NLN Exams		
Number of Students Enrolled in Nursing Program	Yes	No	Total
Less than 50	10	1	11
51-75	21	9	30
76-100	45	15	60
100-149	37	36	73
Greater than 150	95	86	181
Total	208	147	355

$\chi^2 = 17.66$ df = 4 $p < .01$

Table 26

Summary Table of Nonsignificant Chi-square Analysis Between Size of Nursing Program and Assessment Measures Utilized Upon Entry, Upon Graduation, and Following Graduation

Measurement	χ^2	probability
Upon Entry		
ACT Scores	1.21	.87
SAT Scores	2.66	.61
High School GPA	1.46	.83
College GPA	2.00	.73
Critical Thinking	2.51	.64
Student Portfolio	1.29	.86
Other	4.03	.40
Upon Graduation		
College GPA	4.25	.37
GRE Scores	–	– [a]
Miller Analogy	–	– [a]
Critical Thinking	1.77	.77
Student Interview	.56	.96
Acceptance in Grad School	5.12	.27
Institutional Exams	1.27	.86
Mosby Nursing Exams	4.82	.30
Client Surveys	1.32	.85
COMP Scores	.00	1.00
Student Portfolio	–	– [a]
Other	–	– [a]
Following Graduation		
Employer Survey	–	– [a]
Alumni Survey	–	– [a]
Acceptance in Grad. School	3.21	.52
Other	–	– [a]

[a]Twenty percent (20%) of cell frequencies are less than 5.

Hypothesis 2c

Is the respondents selection of NLN criteria to evaluate, independent of the type of conceptual framework utilized by the nursing program?

Data analysis yielded several significant findings, thus selection of some NLN criteria were dependent upon the type of conceptual framework utilized by the nursing program. Those programs that selected to evaluate program satisfaction were less likely than expected to utilize a caring conceptual framework. Whereas, those programs which utilized a developmental framework were more likely than expected to evaluate attainment of credentials. Furthermore, those that utilized a general systems framework were more likely than expected to select professional development as an outcome to evaluate (Table 27). Table 28 presents the nonsignificant findings related to type of conceptual framework and selection of NLN criteria.

Research Question #3

How do nurse educators use the information obtained from outcomes assessment?

The respondents were asked to prioritize how they used the information obtained from outcomes assessment of students. Of those that did, 45.7% indicated that improvement of curriculum was their highest priority and secondly, improvement of teaching (Table 29). Several respondents did not prioritize how they used the information but improvement of curriculum, followed by improvement of teaching were most frequently selected. Improving the curriculum remained the highest priority when

Table 27

Frequencies and Chi-square Analysis: Type of Conceptual Framework used by Nursing Programs and Their Selection of NLN Criteria to Evaluate

	Program Satisfaction		
Caring Conceptual Framework	Yes	No	Total
Yes	37	30	67
No	211	82	292
Total	248	112	360

$\chi^2 = 6.41$ df = 1 $p < .01$

	Professional Development		
General Systems Framework	Yes	No	Total
Yes	56	45	101
No	107	152	259
Total	163	197	360

$\chi^2 = 5.30$ df = 1 $p < .05$

	Attainment of Credentials		
Developmental Framework	Yes	No	Total
Yes	20	23	43
No	87	230	317
Total	107	253	360

$\chi^2 = 5.70$ df = 1 $p < .05$

Table 28

Summary Table of Nonsignificant Chi-square Analysis Between Type of Conceptual Framework used by Nursing Programs and Selection of NLN Criteria to Evaluate

	Type of Conceptual Framework					
	Adaptation		General Systems		Developmental	
Criterion	χ^2	prob.	χ^2	prob.	χ^2	prob.
Critical Thinking	.00	1.00	.98	.32	.00	.99
Communication	.00	.93	.06	.79	.80	.37
Therapeutic Nursing Interventions	.12	.71	.49	.48	1.38	.23
Graduation Rates	.05	.81	.71	.39	1.02	.31
Employment Rates	2.17	.14	.16	.68	.40	.52
Program Satisfaction	.04	.82	2.25	.13	.00	1.00
Professional Development	1.37	.24			2.69	.10
Personal Development	.18	.66	.00	1.00	1.96	.16
Attainment of Credentials	.00	1.00	2.76	.09		
Organization of Work Environment	–	– [a]	–	– [a]	–	– [a]
Scholarship	.01	.90	.07	.78	.27	.60
Service	1.30	.25	.24	.61	.05	.82
Nursing Unit Defined	.34	.55	.53	.46	3.57	.05

Criterion	Integration χ^2	prob.	Competency χ^2	prob.	Caring χ^2	prob.
Critical Thinking	.81	.36	.00	.96	.00	1.00
Communication	.00	1.00	.00	.95	2.14	.14
Therapeutic Nursing Intervention	.21	.63	.16	.68	.92	.33
Graduation Rates	.12	.72	1.02	.31	.84	.35
Employment Rates	.00	1.00	.00	1.00	.45	.49

[a]Twenty percent (20%) of cell frequencies are less than five.

Table 28 (continued)

Criterion	Integration χ^2	Integration prob.	Competency χ^2	Competency prob.	Caring χ^2	Caring prob.
Program Satisfaction	.00	1.00	.00	1.00		
Professional Development	.65	.41	.00	1.00	2.81	.09
Personal Development	.02	.87	.35	.55	.15	.68
Attainment of Credentials	1.60	.20	.00	1.00	1.84	.17
Organization of Work Environment	–	– [a]	–	– [a]	–	– [a]
Scholarship	1.85	.17	–	– [a]	.12	.72
Service	1.24	.26	.00	1.00	.00	.98
Nursing Unit Defined	.00	1.00	.37	.54	.36	.54

	Other χ^2	Other prob.
Critical Thinking	.00	.97
Communication	.00	.98
Therapeutic Nursing Intervention	.00	.96
Graduation Rates	1.10	.29
Employment Rates	1.59	.20
Program Satisfaction	2.21	.13
Professional Development	.00	1.00
Personal Development	1.74	.18
Attain of Credentials	.01	.89
Organization of Work Environment	–	– [a]
Scholarship	.27	.60
Service	.06	.80
Nursing Unit Defined	.00	1.00

[a]Twenty percent (20%) of cell frequencies are less than five.

Table 29

Use of Outcomes Assessment Data by Nurse Educators:

Frequencies and Percentages

Use	Frequency	Percentage
	N	%
To Improve Curriculum		
Highest Priority	183	47.78
Second Priority	49	12.79
Third Priority	8	2.09
Fourth Priority	1	.26
Selected but not Prioritized	142	37.08
Total	383	100.00
To Improve Teaching		
Highest Priority	17	5.74
Second Priority	134	45.28
Third Priority	50	16.89
Fourth Priority	13	4.39
Selected but not Prioritized	82	27.70
Total	296	100.00
To Improve the Evaluation Process		
Highest Priority	13	4.66
Second Priority	49	17.56
Third Priority	89	31.90
Fourth Priority	56	20.07
Selected but not Prioritized	72	25.81
Total	279	100.00
To Obtain Accreditation		
Highest Priority	18	8.34
Second Priority	38	17.59
Third Priority	50	23.15
Fourth Priority	62	28.70
Selected but not Prioritized	48	22.22
Total	216	100.00

Table 29 (continued)

Use	Frequency	Percentage
	N	%
Results Not Used		
Highest Priority	8	57.14
Second Priority	6	42.86
Total	14	100.00
Other		
Highest Priority	3	15.79
Second Priority	12	63.16
Selected but not Prioritized	4	21.05
Total	19	100.00

the response rates were weighted. This was followed by results not used, other, improvement of teaching, improvement of the evaluation process, and obtaining accreditation (Table 30).

The respondents were also asked to select from a list, comparisons they made with the results of outcomes assessment data. Comparison within the institution, followed by national, and statewide comparison were most frequently selected. Seventy-six (13.71%) respondents indicated that no comparisons were made with the data (Table 31).

Research Question #4

How is the outcome of caring by nursing students assessed in baccalaureate nursing programs?

Table 30

Weighted Scores of Use of Outcomes Data by Nurse Educators

Use	Weighted Score
To Improve Curriculum	1.28
Results Not Used	1.42
Other	1.80
To Improve Teaching	2.27
To Improve Evaluation Process	2.90
To Obtain Accreditation	2.92

Table 31

Comparisons Made with Outcomes Data by Nurse Educators

Comparison	Frequency N	Percentage %
Statewide	134	24.19
National	156	28.16
Institutional	161	29.06
None	76	13.72
Other	27	4.87
Total	554a	100.00

[a]Respondents selected more than one comparison.

Several questions pertaining to caring addressed this research question. The first question the survey explored was whether the students ability to demonstrate caring behaviors was evaluated. The findings indicated that 214 (53.5%) of the respondents were currently evaluating or planning to evaluate caring behaviors by nursing students. The caring behaviors most frequently measured in the curriculums were as follows: values and attitudes toward others (26.50%), the art of nursing (24.57%), the action component of nursing (23.04%), the understanding of other peoples' ways (13.66%), and the knowledge base of caring (12.23%). More specifically, the survey asked the respondents to select measurements which were currently used to assess caring behaviors. Results can be found in Table 32. Of those programs that were currently or planning to evaluate caring by their nursing students, 122 (30.5%) programs evaluated caring in the clinical area and classroom and 82 (20.5%) programs only evaluated caring in the clinical setting. Even though caring was being evaluated clinically, only 180 (45%) indicated that their clinical evaluation tool specifically identified caring behaviors which needed to be demonstrated by nursing students.

Hypothesis 4a

Is the type of measurement used to assess caring behaviors by nursing students independent of the type of conceptual framework utilized by the nursing program?

Chi-square analysis revealed that those programs which utilized peer evaluation as a measurement of caring by nursing students were more

Table 32

Measurements of Caring Behaviors Utilized by Nursing Programs: Frequencies and Percentages

Measurement	Frequency	Percentage
	N	%
Client Perception	111	15.23
Student Evaluation	185	25.38
Pen & Paper Test	53	7.27
Peer Evaluation	49	6.72
Clinical Personnel Perception	128	17.56
Role Modeling by Student	98	13.44
Creative Projects	65	8.92
Other	40	5.48
Total	729[a]	100.00

[a]Respondents selected more than one measurement.

likely than expected to have a general systems conceptual framework (Table 33). Whereas, those programs which utilized clinical personnel perception as measurement were less likely than expected to have a caring conceptual framework (Table 34). In other words, there is a dependent relationship between the use of a general systems framework and the measurement of peer evaluation; the use of a caring conceptual framework and the use of clinical personnel perception as a measurement of caring by nursing students. Table 35 includes the nonsignificant findings of the chi square analysis related to conceptual frameworks and measurements of caring.

Table 33

Frequencies and Chi-square Analysis Between General Systems Conceptual Framework and Measurements of Caring: Peer Evaluation

	General Systems Framework		
Peer Evaluation	Yes	No	Total
Yes	19	29	48
No	45	152	197
Total	64	181	245

$\chi^2 = 4.77$ df = 1 $p < .05$

Table 34

Frequencies and Chi-square Analysis Between Caring Conceptual Framework and Measurements of Caring: Clinical Personnel Perception

		Caring Framework		
Clinical Personnel Perception		Yes	No	Total
	Yes	11	166	177
	No	3	162	165
	Total	14	328	342

$\chi^2 = 4.39$ df = 1 $p < .05$

Table 35

Summary Table of Chi-square Analysis Between Conceptual Frameworks and Measurements of Caring: Nonsignificant Findings

Conceptual Framework	χ^2	probability
	Client Perception	
Adaptation	.00	.93
General Systems	.02	.88
Developmental	.00	.94
Integrated	.12	.72
Competency-based	.84	.35
Caring	.03	.86
Other	.21	.63
	Student Evaluation	
Adaptation	2.74	.09
General Systems	.27	.59
Developmental	.03	.84
Integrated	3.80	.05[a]
Competency-based	–	–[a]
Caring	.00	.98
Other	.33	.56
	Pen and Paper Test	
Adaptation	.00	1.00
General Systems	.14	.69
Developmental	.00	1.00
Integrated	.00	1.00[a]
Competency-based	–	–[a]
Caring	1.44	.22
Other	.00	.92
	Peer Evaluation	
Adaptation	.72	.39
Developmental	.00	1.00
Integrated	.00	1.00[a]
Competency-based	–	–[a]
Caring	.25	.61
Other	.46	.49

[a]Twenty percent (20%) of cell frequencies are less than five.

Table 35 (continued)

Conceptual Framework	χ^2	probability
	Clinical Personnel Perception	
Adaptation	.00	.99
General Systems	.00	1.00
Developmental	.00	.96
Integrated	.76	.38
Competency-based	1.13	.28
Other	1.72	.18
	Role Modeling	
Adaptation	.05	.81
General Systems	.01	.89
Developmental	1.57	.20
Integrated	.01	.89
Competency-based	.05	.81
Caring	.00	.95
Other	.01	.89
	Creative Projects	
Adaptation	.00	1.00
General Systems	.00	1.00
Developmental	.13	.71
Integrated	.07	.78[a]
Competency-based	–	–[a]
Caring	3.14	.07
Other	2.28	.13
	Other Measurements	
Adaptation	.00	1.00
General Systems	.13	.70
Developmental	.45	.50
Integrated	.78	.37[a]
Competency-based	–	–[a]
Caring	.02	.88
Other	1.77	.18

[a]Twenty percent (20%) of cell frequencies are less than five.

Hypothesis 4b

Is the use of a clinical evaluation tool which specifically evaluates caring behaviors by nursing students independent of the type of conceptual framework utilized by the nursing program?

Chi-square analysis indicated that those respondents which selected other as their conceptual framework were more likely than expected to have a clinical tool which specifically identified caring behaviors which needed to be demonstrated (Table 36). Respondents who selected the option of other as a conceptual framework wrote in a conceptual framework or theorist not identified in the survey. Table 37 includes the nonsignificant findings related to conceptual frameworks and the usage of a clinical evaluation tool which measures caring.

Table 36

Frequencies and Chi-square Analysis Between Clinical Evaluation Tool which Measures Caring and Conceptual Frameworks: Other

		Other Framework		
Clinical Tool		Yes	No	Total
	Yes	64	113	177
	No	42	123	165
	Total	106	236	342

$\chi^2 = 4.08$ df = 1 $p < .05$

Table 37

Summary Table of Chi-square Analysis Between Clinical Evaluation Tool Which Measures Caring on Conceptual Framework: Nonsignificant Findings

Conceptual Framework	χ^2	probability
Adaptation	.26	.60
General Systems	.00	1.00
Developmental	.18	.66
Integrated	.03	.85
Competency-Based	3.15	.07
Caring	2.07	.15

Hypothesis 4c

Are the caring behaviors measured in the curriculum independent of the type of conceptual framework utilized by the nursing program?

Chi-square analysis failed to reject the null hypothesis (Table 38).

Research Question #5

What are the perceptions of nurse educators regarding the outcomes assessment movement in nursing education?

Table 39 presents the frequencies, percentages and means of the responses to the questions pertaining to the nurse educators perception of the outcomes movement. Three hundred forty-seven (89.2%) of the respondents strongly agreed or agreed to the statement that the outcomes movement, as well as the caring movement (72.98%) will continue in nursing education. The majority of the respondents (90.16%) strongly

Table 38

Summary Table of Chi-square Analysis Between Conceptual Framework on Measurements of Caring Behavior: Nonsignificant Findings

	Behaviors									
	1		2		3		4		5	
	χ^2	prob.	χ^2	prob.	χ^2	prob.	χ^2	prob.	χ^2	prob.
Adaptation	.52	.47	.00	1.00	.08	.76	.02	.87	.63	.42
General Systems	.03	.86	.22	.63	.02	.88	2.06	.15	.00	.99
Developmental	.00	.95	.36	.54	.00	.95	2.69	.10	1.06	.30
Integrated	1.43	.23	.59	.43	.03	.85	.01	.91	.00	1.00
Competency Based	.00	1.00	1.95	.16	.79	.37	1.42	.23	1.97	.16
Caring	2.76	.09	2.16	.14	1.00	.31	2.12	.14	1.36	.24
Other	3.82	.05	1.09	.29	1.54	.21	.14	.70	.42	.51

Behavior 1: The art of nursing
Behavior 2: Values and attitudes toward others
Behavior 3: Action component
Behavior 4: Knowledge base of caring
Behavior 5: Understanding of other peoples' ways

Table 39

Frequencies, Percentages, and Means of Nurse Educators' Perception Regarding the Outcomes Assessment Movement

Statement 1: The outcomes assessment movement will continue as a major movement in nursing education.

Scale	Frequency	Percentage
Strongly Agree	176	45.24
Agree	171	43.96
Neutral	28	7.20
Disagree	11	2.83
Strongly Disagree	3	.77

Mean: 4.3 on a scale of 1-5 with 1 indicating strongly disagree and 5 indicating strongly agree

Statement 2: The outcomes assessment criteria established by the NLN is just more paperwork.

Scale	Frequency	Percentage
Strongly Agree	11	2.86
Agree	44	11.43
Neutral	78	20.26
Disagree	182	47.27
Strongly Disagree	70	18.18

Mean: 2.3

Statement 3: Caring cannot be assessed as an outcome.

Scale	Frequency	Percentage
Strongly Agree	16	4.10
Agree	38	9.74
Neutral	88	22.56
Disagree	186	47.70
Strongly Disagree	62	15.90

Mean: 2.3

Table 39 (continued)

Statement 4: Information gained from assessment of student outcomes does influence my teaching.

Scale	Frequency	Percentage
Strongly Agree	150	38.86
Agree	198	51.30
Neutral	22	5.70
Disagree	6	1.55
Strongly Disagree	10	2.59
Mean: 4.2		

Statement 5: Information gained from assessment of student outcomes should not influence a program's curriculum.

Scale	Frequency	Percentage
Strongly Agree	1	.25
Agree	5	1.29
Neutral	7	1.80
Disagree	150	38.56
Strongly Disagree	226	58.10
Mean: 1.4		

Statement 6: The caring movement in nursing education will continue.

Scale	Frequency	Percentage
Strongly Agree	87	22.59
Agree	194	50.39
Neutral	85	22.08
Disagree	14	3.64
Strongly Disagree	5	1.30
Mean: 3.8		

Statement 7: Behavioral objectives and student outcomes are the same.

Scale	Frequency	Percentage
Strongly Agree	12	3.15
Agree	69	18.11
Neutral	49	12.86
Disagree	188	49.34
Strongly Disagree	63	16.54
Mean: 2.4		

agreed/agreed that information gained from assessment of student outcomes did influence their teaching, whereas, 376 (96.66%) disagreed or strongly disagreed that information from assessment of student outcomes should not influence the curriculum. Another finding indicated that 20.26% of the respondents were neutral about the statement that the outcomes criteria established by the NLN was just more paperwork, 22.56% were neutral regarding the statement that caring cannot be assessed as an outcome, and 12.86% were neutral as to whether behavior objectives and student outcomes were the same.

Hypothesis 5a

Is there a significant difference between those programs that are undergoing NLN accreditation next year and those that are not with respect to their perception/opinion of the outcomes assessment movement?

T-tests confirmed that there was a significant difference between those programs that are undergoing NLN accreditation next year and those that are not with respect to their perception of whether behavioral objectives and student outcomes were the same (Table 40). The mean for those programs undergoing NLN accreditation next year was 2.20 and the mean for those programs not undergoing NLN accreditation next year was 2.47 on a Likert scale of 1-5 with 5 indicating strongly agree. Table 41 presents the nonsignificant chi-square findings related to programs undergoing NLN accreditation next year and those that are not and other perceptions of the outcomes movement.

Table 40

T-test Analysis Between Nursing Programs Undergoing NLN Accreditation Next Year vs Nursing Programs That Are Not and Perception: Behavioral Objectives and Student Outcomes are the Same

Undergoing NLN Accreditation Next Year	N	$\bar{X}$	SD	t-value	prob.
Yes	88	2.20	1.09	-2.14	.03
No	292	2.47	1.04		

Responses based on Likert scale of 1-5 with 1 indicating strongly disagree and 5 strongly agree.

Table 41

Summary Table of t-test Analysis Between Nursing Programs That are Undergoing NLN Accreditation Next Year and Nursing Programs That Are Not and Perceptions of the Outcomes Assessment Movement: Nonsignificant Findings

Perception	t-value	prob.
Outcomes will continue as major movement	-.44	.65
NLN criteria are more paperwork	-1.70	.09
Information should not influence curriculum	-.37	.71

Hypothesis 5b

Is there a significant difference among the types of institutions and the nurse educators perception of the outcomes assessment movement?

T-tests confirmed that there is a significant difference between public and private institutions with respect to the perception that the caring movement in nursing will continue using a technique that is correct 95 times out of 100 (Table 42). The mean for public institutions was 3.96 and 3.78 for a private institution on a scale of 1-5 with 5 indicating strongly agree. Thus, public institutions lean more towards agreeing with the perception that the caring movement will continue than private institutions. Table 43 presents the nonsignificant chi-square findings between public and private programs and other perceptions of the outcomes movement.

Table 42

T-test Analysis Between Private vs. Public Institutions and Perception: The Caring Movement in Nursing Education will Continue

Type of Institution	N	$\bar{X}$	SD	t-value	prob.
Public	198	3.96	.78	2.07	.03
Private	166	3.78	.88		

Responses based on Likert scale of 1-5 with 1 indicating strongly disagree and 5 strongly agree.

Table 43

Summary Table of t-test Analysis Between Private vs. Public and Perception of Outcomes Assessment Movement: Nonsignificant Findings

Perception	t-value	prob.
Outcomes assessment movement will continue	-.03	.98
NLN criteria are more paperwork	1.35	.17
Caring cannot be assessed as an outcome	-.78	.43
Information from outcomes assessment does influence teaching	-1.35	.17
Information from outcomes assessment should not influence the curriculum	.42	.67
Behavioral objective and outcomes are the same	.08	.93

Hypothesis 5c

Is there a significant difference between the size of the nursing program and the nurse educators perception of the outcomes assessment movement?

T-test analysis did not reveal any significant findings (Table 44), therefore the null hypothesis is retained; there is no significant difference between the size of the nursing programs (those under 100 students and those over 100 students) and their perception of the outcomes movement.

Table 44

Summary Table of T-test and One-way Analysis of Variance Between Those Nursing Programs with Enrollments under 100 and Those over 100 and Perception of Outcomes Movement: Nonsignificant Findings

Perception[a]	t-value	prob.
Information from outcomes assessment does influence teaching	-.37	.71
Information from outcomes assessment should not influence the curriculum	.19	.85
Caring movement in nursing education will continue	.10	.92
Behavioral objectives and outcomes are the same	.71	.47

Perception[b]	F ratio	prob.
Outcomes movement will continue	.37	.82
NLN criteria are more paperwork	.28	.89
Caring cannot be assessed as an outcome	.14	.96

[a]Enrollment sizes collapsed to two cells (under 100 and greater than 100).

[b]Enrollment sizes were not collapsed, thus had five groups.

Hypothesis 5d

Is there a significant difference among the institutions that have an assessment plan in place, versus those that do not or are developing one and the nurse educators perception of the outcomes assessment movement?

There is a significant difference in at least two of the means of those institutions that have an assessment plan in place, versus those that do not or are developing one and their perception that caring cannot be assessed as an outcome. Using the Scheffé post hoc test, a difference was identified between Groups 1 and 3. This group accounted for 1.81% of the variance in the ratings of whether caring can be assessed as an outcome (Table 45). Group 1 were those institutions that had a plan in place and Group 3 were those institutions that were developing one. Table 46 presents the nonsignificant findings of the one-way analysis between institutions with or without outcomes assessment plans and other perceptions of the outcomes movement.

Hypothesis 5e

Is there a significant difference among the categories of positions and the nurse educators perception of the outcomes movement?

There is a significant difference in at least two of the means of the various positions represented in the study and their perception that caring cannot be assessed as an outcome (Table 47). Using the Scheffé post hoc test, a difference was identified between group 1 and 2, which are the Heads of the program and Curriculum chairs. This group

Table 45

One-way Analysis of Variance Between Institutions With, Without, Developing or Do Not Know an Outcome Assessment Plan and Perception: Caring Cannot be Assessed as an Outcome

Source	df	SS	MS	F	F prob.
Between Group	3	9.89	3.29	3.38	.01
Within Group	383	373.73	.97		
Total	386	383.63			

Scheffé Post Hoc Test

Mean	Group	1	2	3	4
2.2138	1 (has plan)				
2.3667	2 (no plan)				
2.5442	3 (developing plan) *				
3.0000	4 (do not know)				

*Locates significant differences.

Table 46

Summary Table of One-way Analysis of Variance of Institutions With, Without, Developing one, and Do Not Know of an Outcomes Plan and Perceptions: Nonsignificant Findings

Perception	F ratio	prob.
Outcomes assessment will continue as major movement	1.00	.39
NLN criteria are just more paper work	1.09	.34
Information from outcomes assessment does influence my teaching	.24	.86
Information from outcomes assessment should not influence curriculum	.08	.97
Caring movement in nursing education will continue	.35	.78
Behavioral objectives and student outcomes are the same	1.26	.28

Table 47

One-way Analysis of Variance Between Respondents Positions and Perception: Caring Cannot be Assessed as an Outcome

Source	df	SS	MS	F	F prob.
Between Groups	2	7.19	3.59	3.36	.02
Within Groups	385	380.81	.98		
Total	387	388.01			

Scheffé Post Hoc Test

Mean	Group	2	3	1
2.1869	2 (Curr Chair)			
2.3125	3 (Other)			
2.4936	1 (Chair Program) *			

*Locates significant differences.

accounted for 1.34% of the variance between the perception of whether caring can be assessed as an outcome. Table 48 presents the nonsignificant findings of one-way analysis related to respondent's position and other perceptions of the outcomes movement.

Hypothesis 5f

Is there a significant difference between the size of the institution and the nurse educators' perception of the outcomes movement?

One-way analysis of variance did not yield significant findings, therefore the null hypothesis is retained (Table 49).

Table 48

Summary Table: One-way Analysis of Variance Between Respondents Positions and Perception of Outcomes Movement: Nonsignificant Findings

Perception	F ratio	prob.
Outcomes assessment movement will continue	.41	.66
NLN criteria are more paperwork	.25	.77
Information from outcomes assessment does influence my teaching	.35	.69
Information from outcomes assessment should not influence curriculum	.45	.63
Caring movement in nursing education will continue	1.04	.35
Behavioral objectives student outcomes are the same	.05	.94

Table 49

Summary Table of One-way Analysis of Variance Between Size of Institution and Nurse Educators' Perception of Outcomes Movement: Nonsignificant Findings

Perception	F ratio	prob.
The outcomes assessment movement will continue as major movement in nursing education	1.42	.20
The outcomes assessment criteria established by the NLN are just more paperwork	.31	.92
Caring cannot be assessed as an outcome	.19	.97
Information gained from assessment of student outcomes does influence my teaching	.27	.94
Information from assessment of student outcomes should not influence a programs' curriculum	1.68	.12
The caring movement in nursing education will continue	.16	.98
Behavioral objectives and student outcomes are the same	.75	.60

Hypothesis 5g

Is there a significant difference among the categories of highest degree earned and the nurse educators' perception of the outcomes movement?

One-way analysis of variance yielded one significant finding. There is a significant difference in at least two of the means of the various categories of degrees and their perception that student outcomes informa-

tion should not influence curriculum (Table 50). Using the Scheffé post hoc test, the difference lies between Group 3 (Ph.D. in Nursing) and Group 4 (Non-nursing Ph.D.). This group accounted for 1.54% of the variance in the perception that outcomes assessment information should not influence curriculum. Table 51 includes the nonsignificant findings of one-way analysis between the respondent's degree and other perceptions of the outcomes movement.

Hypothesis 5h

Is there a significant difference among the regional accrediting associations and the nurse educators' perception of the outcomes movement?

One-way analysis did not yield any significant findings, therefore the null hypothesis is retained (Table 52).

The next chapter will summarize these findings as well as present conclusions and make recommendations for future research.

Table 50

One-way Analysis of Variance Between Respondent's with a Masters, Ph. D. in Nursing, and a Non-nursing Ph.D. and Perception: Information Gained from Assessment of Student Outcomes Should not Influence a Program's Curriculum

Source	df	SS	MS	F	F prob.
Between Groups	2	3.11	1.55	3.98	.01
Within Groups	377	147.61	.39		
Total	379	150.73			

Scheffé Post Hoc Test

Mean	Group	3	2	4
1.3111	3 (Ph.D. in Nursing)			
1.5222	2 (Masters)			
1.5250	4 (Non-nursing Ph.D.)	*		

*Locates significant differences.

Table 51

Summary Table of One-way Analysis of Variance Between Respondent's with a Masters, Ph.D. in Nursing, and a Non-nursing Ph.D. and Perception of Outcomes Movement: Nonsignificant Findings

Perception	F ratio	prob.
Outcomes assessment will continue as major movement	.89	.46
NLN criteria are more paperwork	2.25	.06
Caring cannot be assessed as an outcomes	1.16	.32
Information from assessment of student outcomes does influence my teaching	2.53	.08
Caring movement in nursing education will continue	1.56	.21
Behavioral objectives and student outcomes are the same	.63	.52

Table 52

Summary Table of One-way Analysis of Variance Between Regional Accrediting Associations and Respondents' Perception of Outcomes Movement

Perception	F ratio	prob.
Outcomes assessment will continue as major movement	.13	.98
NLN criteria are more paperwork	.52	.75
Caring cannot be assessed as an outcome	.92	.46
Information from outcomes assessment does influence my teaching	.61	.68
Information from outcomes assessment should not influence curriculum	.64	.66
Caring movement will continue in nursing education	1.23	.28
Behavioral objectives and student outcomes are the same	1.22	.29

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Overview of the Study

This study investigated the knowledge and perception of the outcomes assessment movement by nurse educators, the major applications of outcomes assessment results, and the assessment of the specific outcome of caring behaviors demonstrated by nursing students. A questionnaire was developed to address these areas and was mailed to 542 baccalaureate nursing programs, all of whom were NLN accredited. Completed questionnaires were received from 400 programs, resulting in a response rate of 73.8%. Since the majority of the data were nominal, data analysis consisted of frequencies, percentages, and chi-squares. For those questions which yielded interval data, t-tests and one-way analysis of variance were used for analysis.

Forty-nine states as well as the District of Columbia, the Virgin Islands and Puerto Rico were represented in the sample. The state of Iowa was not included in the final survey since nursing programs in that state were surveyed for the pilot study. The majority of the colleges and universities represented were public institutions with enrollments ranging from less than 1,000 to over 30,000 with the majority of nursing programs having enrollments exceeding 150 students. All types of nursing programs which offer a baccalaureate nursing degree were represented in the study with the primary type being generic/B.S.N. completion programs, followed by programs which offered generic, B.S.N. completion and

graduate tracks. Over one-half of the individual respondents to the survey were Deans, Chairpersons, or Heads of the nursing program, with 27% being curriculum chairs of the nursing programs. The majority of the respondents had been in their positions between one to three years and nurse educators for over ten years. Two hundred ninety-seven of the respondents held doctorates, of which 31.5% were doctorates in nursing.

Discussion and Conclusions

The following discussion will examine each major research question and correlating hypotheses and a summary of the findings will follow. Lastly, conclusions will be drawn and opinions offered.

Research Question #1: What is the knowledge level of nurse educators regarding the outcomes assessment movement in higher education?

In order to assess nurse educators' knowledge of the outcomes movement, it was necessary to establish their familiarity with the specific term and antecedents which have led to the outcomes movement. The data indicated that the majority of the respondents were familiar with the outcomes assessment movement in higher education. Nursing literature was found to be the most helpful resource in learning about the outcomes movement. In terms of antecedents, namely national education reports, the majority were familiar with the National League of Nursing's Accreditation Outcomes Project, but not as familiar with the national reports, Nation at Risk, Integrity in the Curriculum, and Involvement in Learning.

Further evidence of the nurse educators' knowledge regarding outcomes assessment was determined by asking the respondent if their state or regional accrediting association required an institutional outcomes assessment plan. This question yielded one of the most significant findings of the study, namely that they did not know. For example, in almost every state surveyed, there were respondents who stated that there was a state requirement for an assessment plan and there were those respondents from the same state that said there was no such requirement. Furthermore, 20.75% of the respondents stated that there was no requirement by their regional accrediting association for an assessment plan and another 16.50% did not know one way or another. Marchese (1990) confirmed that all regional accrediting agencies currently require assessment of student outcomes. Clearly, these findings indicate that there is a lack of communication between the officials of the state and regional accrediting associations and administrators and faculty in colleges and universities.

Surprisingly, the respondents were knowledgeable about the status of their own institutional outcomes assessment plan. Perhaps this was because many of the institutions (150) had a plan in place and 149 were developing plans. Only 91 (22.7%) institutions did not have or were not developing a plan. In terms of specific outcomes assessed by the plans, the results supported Conrad's (1987) study since the majority assessed the outcomes of general education and the student's major or area of specialization. However, only 29.7% of the plans addressed student development outcomes. Student development outcomes examine both affec-

tive and cognitive learning which takes place in college settings. This finding was disheartening since one of the purposes of higher education is to assist the student in his/her own development. Another disturbing statistic revealed by the study indicated that only 56.25% of the institutions distribute copies of the results of the outcomes assessment to the faculty, thus the actual use of outcomes assessment plans may be limited. The following hypotheses assist in further clarification of the nurse educators' knowledge of outcomes assessment.

Hypothesis 1a: Is the respondents' familiarity with the outcomes assessment movement in higher education independent of the variables: type of institution, location of the accrediting regional association, size of institution, type of nursing program, size of nursing program, and type of conceptual framework?

The findings indicated that none of the variables had any relationship with the respondents' familiarity with the outcomes movement. This result was probably due to the fact that 98% of the respondents were familiar with the outcomes movement.

Hypothesis 1b: Is the respondents choice of information source which was most helpful in learning about the outcomes assessment movement independent of the position of the respondent, number of years respondent has served as curriculum chair or dean of the program, years as a nurse educator, degree of the respondent, and program undergoing NLN accreditation next year?

Higher education literature was most helpful in learning about outcomes assessment to those holding the position of dean or chair of the

nursing program, and for those in the position of curriculum chair between four and seven years. Educators with over ten years of experience also found the higher education literature most helpful. Longevity as a nurse educator appears to increase the probability of using higher education literature. Not surprisingly, respondents with a Ph.D. in a field other than nursing found the higher education literature most helpful, whereas those respondents with a Ph.D. in Nursing found the nursing literature most helpful. One surprising result was that those programs undergoing NLN accreditation next year did not find the higher education literature as helpful as nursing literature in learning about outcomes assessment. This finding may be due to the fact that the accreditation process requires numerous factual pieces of information rather than a thorough analysis of the issue and the faculty may not have had time to examine the literature in the field of higher education.

Hypothesis 1c: Is the respondents choice of information source which was most helpful in learning about the outcomes assessment movement independent of their familiarity with the national education reports which acted as antecedents to the outcomes movement?

As one might expect, analysis revealed that higher education literature was most helpful in learning about the Nation at Risk report and the Integrity in the Curriculum report, whereas nursing literature was found most helpful in learning about the Nation at Risk report and the NLN's Accreditation Outcome Project. In the researcher's opinion, several higher education journals provide the current status of the outcomes assessment movement as well as an historical review. In nursing

literature one must examine the appropriate journal to find information about the status of outcomes assessment.

Conclusion for Research Question #1: Although nurse educators are familiar with the outcomes assessment movement generally, many are not aware of the antecedents that have led to the movement. More disturbingly, many nurse educators are not familiar with state and regional accrediting association requirements regarding outcomes assessment plans even though the majority of their affiliated institutions are implementing the plans. Furthermore, although the majority of the respondents found the nursing literature most helpful in learning about outcomes assessment this researcher believes that the higher education literature provides a more complete picture of the outcomes assessment movement. As a result, this researcher believes that the knowledge level of nurse educators regarding outcomes assessment is at best limited and as a result the implementation of outcome assessment plans may be haphazard. The need for nursing education to be knowledgeable about current curriculum movements is best articulated by C. Lenburg, "If nursing is to be taken seriously as a responsible profession... nurse educators will be more effective if they develop a ... deeper understanding of significant social and educational changes on a local and national level (1991, p. 28). Ewell (1991) further warns educators that if they do not become active in higher education reform intrusive enactments by the government may be the consequence.

Research Question #2: What data are utilized to assess the outcome of nursing education in baccalaureate nursing programs?

The analysis of the data regarding measurements used to assess students entering the nursing program, upon graduation, and following graduation revealed similar findings. Upon entry, cognitive measures were most frequently used to assess the students, in particular college and high school GPAs were used, followed by SAT and ACT scores. Assessment measures used upon graduation were once again primarily cognitive in nature; specifically NCLEX scores, college GPA and NLN exams. A surprising statistic was that critical thinking tests were used by only 3.21% of the programs to assess students upon graduation. This is contrary to Hart & Waltz's (1988) study which reports that 43.17% of the nursing programs use critical thinking tools to assess student outcomes. The use of cognitive measurements to assess students upon entry and graduation are not surprising since the attainment of knowledge is the primary reason most students go to college. As expected, the measurements following graduation were alumni surveys (39.83%), employer surveys (38.83%) and acceptance into graduate school (19.80%). One and five years were the most frequently cited timing for the collection of assessment data following graduation.

In addition, the questionnaire addressed the thirteen outcomes that have been established by the NLN for accreditation purposes. NLN accrediting guidelines for baccalaureate nursing programs state that five of the thirteen outcomes must be evaluated, along with two of the remaining eight. Of the five mandated criteria, none were selected by the respondents 100% of the time. This result may be because the outcomes criteria are so new. This researcher believes that the NLN has

not communicated the new accrediting requirements effectively. Despite the fact that 1992 will be the first year for implementation of the outcomes criteria, faculty should have been well aware of the new mandates. How can the NLN expect to receive a comprehensive self-study report if new criteria are not communicated in an effective manner?

Of the remaining eight criteria, program satisfaction yielded the highest frequency, followed by professional development. Personal development was selected by only 8% of the respondents thus indicating that this criteria remains a difficult one to assess despite the contention that this is one of the major purposes of a college education. The following hypotheses further delineate the type of data used to assess student outcomes in nursing eduction.

Hypothesis 2a: Is the type of data collected upon entry, graduation, and following graduation independent of the type of institution?

Data analysis yielded only one significant finding for this hypothesis, namely that private schools were more likely than public schools to utilize ACT and SAT scores, high school GPA, and student interviews. One reason for this result may be that private schools attempt to personalize their services.

Hypothesis 2b: Is the type of data collected upon entry, graduation, and following graduation independent of the number of students in the generic nursing program?

Results related to the type of data collected upon entry into the nursing program indicated that programs with enrollments of over 150 students were less likely to use student interviews. This is probably

due to time constraints in that student interviews require a lot of faculty time. Further analysis of the data indicated that programs with over 150 students were more likely to use NCLEX scores as their primary measurement upon graduation and programs with enrollments under 100 were more likely to use NLN exams. This researcher believes that this finding may be related to the student scores for each test. For example, if a nursing program consistently has high scores on the NCLEX exam, that would most likely be the measurement tool used to assess students. Finally, the analysis did not yield any significant findings for data collected following graduation and number of students.

Hypothesis 2c: Is the respondents selection of NLN criteria to evaluate independent of the type of conceptual framework utilized by the nursing program?

Data analysis indicated that programs which utilized a caring conceptual framework were less likely to choose program satisfaction as one of the optional criteria to evaluate. This finding makes the researcher wonder "why" since program satisfaction was most frequently selected by the respondents (63.5%) as a criterion to evaluate for NLN accreditation.

Conclusion for Research Question #2: Cognitive data continues to be the primary measurement when assessing the outcome of nursing education, thus making the intellectual ability of students the primary concern of nursing programs. The personal development of the student was not selected as a frequent outcome to evaluate despite the fact that this is one selling point for baccalaureate nursing education. The thirteen

outcomes selected by the NLN as criteria which need to be evaluated prior to accreditation, continues to indicate that quantitative data are important. In addition, the results indicate that the NLN has not been effective in communicating the actual requirements related to the new outcomes criteria since the five mandated criteria were not selected by all of the respondents as criteria to evaluate.

Research Question #3: How do nurse educators use the information obtained from outcomes assessment?

Based on the following list respondents were asked to prioritize how they would use the information gained in outcomes assessment: to improve curriculum, to improve teaching, to obtain accreditation, not use results, and other. Upon analysis, improvement of curriculum followed by improvement of teaching were ranked the highest. By weighting the ranked scores, improving the curriculum was ranked the highest, followed by results not used, other, improving teaching, improving the evaluation process, and obtainment of accreditation. Respondents were also asked to select from a list, comparisons they made with the results of outcomes assessment data. Unfortunately, 13.72% of the respondents made no comparisons with assessment data obtained. This statistic is similar to Steele's (1990) study which indicated that many institutions use outcomes assessment information for internal use only.

Conclusion for Research Question #3: One conclusion that can be drawn from these findings, is that faculty continue to value assessment in a limited manner. Further support to this conclusion can be drawn from the percentage of respondents that do not make any comparisons with

assessment data obtained from student outcomes. Based on these findings this researcher questions the significance that nurse educators place on outcomes assessment.

Research Question #4: How is the outcome of caring by nursing students assessed in baccalaureate nursing programs?

Previous studies (Bauer, 1990; Slevin & Harter, 1987) have established the fact that caring is taught in nursing programs. This research study first sought to establish whether caring behaviors by nursing students were being evaluated. The results indicate that only 53.5% of the programs were currently or planning to evaluate caring behaviors by their nursing students. In terms of the measurement of caring behaviors, knowledge base was the least frequent measurement and values and attitude toward others was the most frequent measurement. These findings appear to be unique to caring since the majority of educational outcomes are assessed in a cognitive manner rather than a qualitative one. The tools which are used to assess caring behavior by nursing students also support the qualitative approach to assessment. They are: student evaluation (25.38%), clinical personnel perception (17.56%), client perception (15.23%) and role modeling by students (13.44%). Unfortunately, only 45% of the programs' clinical evaluation tools specifically identify caring behaviors which need to be demonstrated by nursing students.

Hypothesis 4a: Is the type of measurement used to assess caring behaviors by nursing students independent of the type of conceptual framework utilized by the nursing program?

Data analysis yielded two interesting results. First, programs with

a caring conceptual framework were less likely to use clinical personnel perceptions as a measurement tool when assessing students caring behavior. This result is surprising since this researcher would assume that caring conceptual frameworks would value the opinions of all health care workers that come in contact with students. Secondly, those with a general systems framework were more likely to use peer evaluation as a measurement tool.

Hypothesis 4b: Is the use of a clinical evaluation tool which specifically evaluates caring behaviors by nursing students independent of the type of conceptual framework utilized by the nursing program?

Data analysis yielded one significant finding related to this hypothesis. The conceptual framework of "other" was found to be more likely than expected to have a clinical tool which specifically identified caring behaviors which needed to be demonstrated. "Other" was the category which allowed respondents to write in a conceptual framework or theorist not identified in the study. This finding may be due to the number (N=122) of respondents that selected other. This researcher thought that the competency-based conceptual framework would yield significant findings since this framework focuses on demonstration of competent behaviors, but it did not. Furthermore, the caring conceptual framework did not yield significant findings. Perhaps this is because some faculty believe that caring cannot be measured.

Hypothesis 4c: Are the caring behaviors measured in the curriculum independent of the type of conceptual framework utilized by the nursing program?

Data analysis yielded no significant findings.

Conclusion for Research Question #4: Qualitative type data appears to be the predominant measurement of caring behaviors by nursing students contrary to the majority of educational outcomes which are assessed quantitatively. In this study the most common measurement of caring behaviors was attitude toward others. This finding is not unusual considering the nature of caring. The majority of research studies (Bauer, 1990; Halldorsdottir, 1990) related to caring are qualitative in nature and many leaders in the field of caring believe that "caring" cannot be measured quantitatively. One disturbing finding was that only about half of the clinical tools used in nursing programs that teach caring, specifically identify caring behaviors as an outcome. How can nurse educators expect students to be caring professionals if they do not help them in identifying what is meant by caring? Finally, Garbin's (1991, p. xiii) challenge to "apply the principles of outcomes assessment to better assure that the graduates of nursing education programs will be caring, competent, and accountable nurses..." will remain unfulfilled if nurse educators are not willing to assess and measure the caring behaviors demonstrated by their nursing students.

Research Question #5: What are the perceptions of nurse educators regarding the outcomes assessment movement in nursing education?

The questionnaire presented six statements about the outcomes movement and caring. Respondents were asked to strongly agree, agree, remain neutral, disagree, or strongly disagree with each statement. Although data analysis did not yield any surprising results, the number

of the responses indicate the intensity of the respondents' perception and opinions. For example, 89.2% of the respondents agreed or strongly agreed that the outcomes movement, as well as the caring movement (72.9%) will continue. The literature review concurs with these perceptions (Hutchings & Marchese, 1990; Thrash, 1990; Leininger, 1990; Tanner, 1990). Interestingly, several of the respondents were neutral about some of the statements. For example, seventy-eight (20.6%) of the respondents were neutral regarding the statement that the outcomes assessment criteria established by the NLN are just more paperwork.

Hypothesis 5a: Is there a significant difference between those programs that are undergoing NLN accreditation next year and those that are not with respect to their perception/opinion of the outcomes assessment movement?

Data analysis of those programs undergoing NLN accreditation next year versus those that are not indicated that there was a significant difference in their perception that behavioral objectives and student outcomes were the same. The average rating for those institutions undergoing accreditation next year was 2.20 and the average rating for those not undergoing accreditation was 2.47 (on a Likert scale of 1-5 with 5 being strongly agree). While both appear to disagree with this perception, those programs undergoing accreditation next year disagree more.

Hypothesis 5b: Is there a significant difference among the types of institutions and the nurse educators' perception of the outcomes assessment movement?

Data analysis indicated that nursing programs in private versus public institutions had a significant difference in their perception that the caring movement in nursing will continue. The average rating for public institutions was 3.96 and the average rating for private institutions was 3.78 (on a Likert scale of 1-5 with 5 being strongly agree). Thus, the means indicate that nurse educators of public institutions believe that the caring movement will continue more than those nurse educators in private institutions.

Hypothesis 5c: Is there a significant difference between the size of the nursing program and the nurse educators' perception of the outcomes assessment movement?

T-test analysis did not yield any significant findings.

Hypothesis 5d: Is there a significant difference among the institutions that have an assessment plan in place, versus those that do not or are developing one and the nurse educators' perception of the outcomes assessment movement?

One-way analysis of variance indicated that there was a significant difference between those institutions that had outcome plans in place, were developing such plans, and those that had no plans in relation to their perception that caring cannot be assessed as an outcome. The difference lies between those institutions that had outcome plans in place and those that were developing plans. The average rating for those institutions with a plan was 2.21 and for those developing one the average rating was 2.54 on a Likert scale of 1-5 with 5 being strongly agree. Thus, one could infer that those institutions with an outcome

plans more strongly disagreed with the perception that caring cannot be assessed as an outcome versus those that are just developing a plan.

Hypothesis 5e: Is there a significant difference among the categories of positions and the nurse educators' perception of the outcomes movement?

There is a difference between the perception of the chair of the nursing program and the curriculum chair regarding the statement that caring cannot be assessed as an outcome. The average rating for curriculum chairs was 2.18 and for chairs of the nursing program it was 2.49 on a Likert scale of 1-5 with 5 being strongly agree. While both appear to disagree with this perception, curriculum chairs disagree more. This finding may be because curriculum chairs are more familiar with the measurement of student outcomes more so than chairs of nursing programs.

Hypothesis 5f: Is there a significant difference among the size of the institution and the nurse educators' perception of the outcomes movement?

One-way analysis of variance did not yield any significant findings.

Hypothesis 5g: Is there a significant difference among the categories of highest degree earned and the nurse educators' perception of the outcomes movement?

There is a difference between respondents with a Ph.D. in non-nursing areas and those with a Ph.D. in Nursing and their perception that information gained from assessment of student outcomes should not influence a program's curriculum. The average rating for respondents with a non-nursing Ph.D. was 1.52 and for those with a Ph.D. in Nursing

it was 1.31 on a Likert scale of 1-5 with 5 indicating strongly agree. Thus, nurse educators with a Ph.D. in Nursing more strongly disagreed with the statement than those with a Ph.D. in another field. This finding supports the previous finding that a major use of outcomes assessment is improvement of the curriculum.

Hypothesis 5h: Is there a significant difference among the categories of regional accrediting associations and the nurse educators' perception of the outcomes movement?

One-way analysis of variance did not yield any significant findings.

Conclusion for Research Question #5: Nurse educators' perceptions regarding outcomes assessment clearly portray the current "feeling" in the nursing profession. Outcomes are well accepted overall, but many educators continue to remain cautious about the amount of work required by the implementation of outcomes and the use of information from outcomes. For example, only 65.5% of the respondents disagreed or strongly disagreed with the statement that the outcome criteria established by the NLN are more paperwork. Furthermore, the caring movement continues to gain favor with nurse educators. The majority of the respondents believed that caring movement in nursing education will continue. Clearly, the nurse educators' perception regarding outcomes assessment and caring will strongly influence the future of these movements in nursing education.

Implications

This study has answered several questions about outcomes assessment and the assessment of caring behaviors demonstrated by nursing students. Based upon this study, this researcher believes that there are several initiatives that could be implemented. First, nurse educators need to enhance their knowledge of outcomes assessment if they expect to be active participants in the outcomes movement. They must become more knowledgeable about educational outcome issues overall, not just nursing. Deans and Chairpersons of nursing programs must take an active role in exposing nurse educators to higher education issues. For example, faculty should be encouraged to attend higher education conferences. Attendance at these conferences will enhance the expertise of nurse educators in both education and nursing. In addition, faculty should be encouraged to read circulated higher education journals that speak to broader issues of student outcomes.

Secondly, if nursing outcomes assessment is to be successful, communication needs to be enhanced between accrediting associations, faculty and administrators regarding the requirements, purpose, and use of outcomes criteria. Professional journals could play an important role by seeking and publishing articles on outcomes. In addition, reports from state oversight boards and accrediting agencies could be made available to all faculty, thereby making faculty more accountable for being familiar with issues and rulings in their state and profession.

Thirdly, information from outcomes assessment needs to be made available to all faculty. Improvement of teaching nor enhancement of the

curricula can be expected if the outcomes data is not shared. An ideal committee for considering the implementation of outcomes assessment data would be the college curriculum committee.

Finally, nurse educators need to place greater emphasis on the outcomes of caring behaviors by nursing students if the nursing profession expects to maintain its caring heritage. If caring is the essence of nursing, nurse educators must ensure that graduates are caring, competent nurses. Nursing students need to be evaluated regarding their ability to demonstrate caring behaviors. In addition, nurse educators need to teach students the benefits of being a caring nurse. Faculty need to role model caring if these characteristics are to become an integral part of the preparation process of nurses.

Recommendations for Further Study

The following recommendations for further study are based on the findings of this study.

1. Since outcomes assessment has become part of the accreditation process, further investigation of whether outcomes assessment will improve student learning is necessary. Both qualitative and quantitative investigations are needed in order to assess cognitive and affective learning.
2. Given this study's implication that nurse educators are not familiar with the higher education literature, the question of whether nurse educators are generally not exposed to mainstream educational developments presents itself. Thus further study is warranted

relating to whether nurse educators are isolated from the higher education community and implications to their students of that isolation.

3. In view of the pervasive acceptance of caring by nurse educators as a cornerstone of nursing and given this study's conclusion that there is limited evaluation of caring behaviors by nursing students, additional studies are warranted which will both inventory the tools available to measure caring behaviors and those which most help develop caring behaviors.
4. This study found that the majority of nurse educators did not select the personal development of the student as an outcome to evaluate as part of the NLN accreditation process despite the fact that many believe that a college degree helps students grow cognitively and emotionally. Further investigation as to how nurse educators' perceive their role in enhancing a students' personal development is necessary.
5. This study indicated that many nurse educators were cautious of the work required by the implementation of the new NLN outcomes criteria. A study which investigated the actual workload required of nurse educators in preparing for an NLN accreditation visit with the new outcomes criteria would be appropriate.

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APPENDIX

Cover Letter

Outcomes Assessment Questionnaire

Post Card Reminder

Follow-up Cover Letter

Cover Letter

Date

Chairperson's Name
Name and Address of Nursing Program

Dear Chairperson:

I am a doctoral candidate at Iowa State University working on a study regarding two current movements in nursing education: outcomes assessment and the caring curriculum. The purpose of my study is twofold: (1) to elicit from nurse educators their knowledge of outcomes assessment and their usage of this information and (2) to acquire insights from nurse educators concerning their methods of assessing "caring" by nursing students.

I would appreciate it if the chairperson of your curriculum committee, or yourself if he or she is unavailable, would voluntarily answer the attached questionnaire which will take approximately fifteen minutes. All responses will remain confidential and will be destroyed upon completion of the study. A self addressed stamped envelope is enclosed for the return of the questionnaire, which is coded for mailing purposes only. Please return the completed questionnaire by April 30, 1992.

Thank you for your assistance. If you would like more information about the study, please contact me at the address below.

Sincerely,

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Des Moines, Iowa 50311

Outcomes Assessment Questionnaire

Section I. Student Outcomes Assessment: Knowledge

This study has defined student outcomes assessment as the assessment of the results of undergraduate education.

Please answer the following questions by putting a check by the response that applies to you.

01. Prior to this survey, were you familiar with the student outcomes assessment movement in higher education?
____Yes
____No

02. If yes, which of the following helped you learn the most about the outcomes assessment movement?

_____Higher education literature
_____Nursing education literature
_____Workshops
_____Other (please identify_____)

03. Does your state have a plan which requires institutions to have a student outcomes assessment plan?

____Yes
____No
____Do not know

04. Does your regional accrediting agency require a student outcomes assessment plan?

____Yes
____No
____Do not know

05. Several national educational reports were antecedents to the outcomes assessment movement. Which of the following reports are you familiar with?

_____Nation at Risk report
_____Integrity in the Curriculum report
_____Involvement in Learning report
_____NLN's Accreditation Outcomes Project

Section II: Outcomes Assessment Plan

Part A: Institutional Plan

Please check the response that best describes your overall institution.

06. Does your institution have a student outcomes assessment plan?

____Yes
____No
____Developing one
____Do not know

If you answered no or do not know to question #6, please move on to question #12.

07. How long has your student outcomes assessment plan been in place?
_____Less than one year
_____One to two years
_____Three to five years
_____Do not know

08. Does your outcomes assessment plan assess: (you may select more than one)

____General education outcomes
____Major/specialization outcomes
____Student development outcomes
____Do not know
____Other (please identify_____)

09. Does the faculty receive a copy of the results of the colleges' student outcomes assessment?
____Yes
____No
____Do not know

10. Who is responsible for assessing student outcomes in your institution? (you may select more than one)

____Institutional Research
____Academic Dean
____Individual Deans of Colleges/Departments
____Committee
____No one
____Do not know
____Other (please identify_____)

11. Is there a committee or office responsible for coordinating and evaluating your institution's outcomes assessment program?

____Yes (please identify_____)
____No
____Do not know

Part B: Nursing Program Plan

The current movement in higher education, as well as in nursing, is to evaluate the effectiveness of programs. The following questions are directed at your nursing program's outcomes assessment plan.

Please check the response(s) that best describe your baccalaureate nursing program.

12. Which of the following measurements are used to assess students upon entering your nursing program?

_____ACT scores
_____SAT scores
_____High school GPA
_____College GPA
_____Critical thinking tests
_____Student interviews
_____Student portfolios
_____Other (please identify_____
_____)

13. Which of the following measurements are used to assess your students upon graduation from your program?

_____College GPA
_____GRE scores
_____Miller Analogy scores
_____Critical thinking tests
_____Student interviews
_____NCLEX scores
_____Acceptance in graduate schools
_____Institutional exams
_____COMP scores
_____Mosby nursing exams
_____NLN exams
_____Client surveys
_____Student portfolios
_____Other (please identify_____
_____)

14. Which of the following measurements are used to assess your students following graduation?

____Employer surveys
____Alumni surveys
____Acceptance in graduate schools
____Other (please identify_____
_____)

15. At what point(s) do you collect assessment data on your students? (please circle timing)

_____Upon entry
_____Freshman Year Spring Fall
_____Sophomore Year Spring Fall
_____Junior Year Spring Fall
_____Senior Year Spring Fall
_____At graduation
_____Following graduation Six months One year
Five years Ten years

16. The new criteria for NLN accreditation includes a section on evaluation of student outcomes. Which of the following would you or have you selected as outcomes to evaluate?

_____Critical thinking
_____Communication
_____Therapeutic nursing intervention
_____Graduation rates
_____Patterns of employment
_____Program satisfaction
_____Professional development
_____Personal development
_____Attainment of credentials
_____Organization of work environment
_____Scholarship
_____Service
_____Nursing unit defined (mission-relevant outcome)

17. For those who selected personal development, how will you assess the outcome?

_____
_____
_____

18. Who is responsible for coordinating and evaluating the information you obtain in your outcomes assessment of students?

_____Chairperson, dean, or head of the nursing program
_____Chairperson of the curriculum committee
_____Research coordinator
_____Individual faculty
_____No one
_____Other (please identify_____)

19. The results of your outcomes assessment of students are primarily used to: (please prioritize with #1 being your highest priority)

_____Improve your curriculum
_____Improve your teaching
_____Improve your evaluation process
_____Obtain regional or specialized accreditation
_____Not used
_____Other (please identify_____)

20. What kinds of comparisons are done with the data?

____Statewide comparison
____National comparison
____Institutional only
____No comparisons are made
____Other (please identify_____)

Section III: Caring as an Outcome in Nursing Students

Care has emerged as a major concept in nursing education. The following questions are directed at the outcome of "caring" by nursing students.

Please check the items which best describe your program.

21. Do you currently evaluate your nursing student's ability to demonstrate caring behaviors?

____Yes
____No
____Planning to add to evaluation
____Do not believe caring behaviors can be quantified

22. If yes, do you evaluate students in the classroom, clinical, or both?

____Classroom only
____Clinical only
____Both classroom and clinical

23. Which of the following measurements do you currently use or plan to use when assessing caring behaviors by nursing students?

_____Client perception
_____Student evaluation
_____Pen and paper test
_____Peer evaluation
_____Clinical personnel perception
_____Role modeling by the student
_____Creative projects
_____Other (please identify_____)

24. Does your clinical evaluation tool specifically identify caring behaviors which need to be demonstrated by students?

____Yes
____No

25. Which of the following caring behaviors are measured in your curriculum (you may select more than one)?

_____The art of nursing or the expressive interpersonal acts of nursing
_____Values and attitudes toward others
_____The action component of nursing or nursing intervention
_____Knowledge base of caring
_____The understanding of other peoples ways of caring

Section IV: Perception of Outcomes Assessment & Caring

The following questions ask you for your perception/opinion regarding the outcomes assessment movement. Please indicate if you strongly disagree (1), disagree (2), neutral (3), agree (4), or strongly agree (5) with the following statements by circling the appropriate number.

	SD	D	N	A	SA
26. The outcomes assessment movement will continue as a major movement in nursing education.	1	2	3	4	5

27.	The outcomes assessment criteria established by the NLN is just more paperwork.	SD 1	D 2	N 3	A 4	SA 5
28.	Caring cannot be assessed as an outcome.	SD 1	D 2	N 3	A 4	SA 5
29.	Information gained from assessment of student outcomes does influence my teaching.	SD 1	D 2	N 3	A 4	SA 5
30.	Information gained from assessment of student outcomes should not influence a program's curriculum.	SD 1	D 2	N 3	A 4	SA 5
31.	The caring movement in nursing education will continue.	SD 1	D 2	N 3	A 4	SA 5
32.	Behavioral objectives and student outcomes are the same.	SD 1	D 2	N 3	A 4	SA 5

Section V: Demographic Information

Part A: Institutional Information

Please check the items which describe your institution.

33. Your institution is:

____Public
____Private
____Four-year liberal arts college/university
____Four-year non-liberal arts college/university
____Other (please specify_____)_

34. Your institution is accredited by which of the following regional agencies?

___the New England Association of Schools and Colleges
___the Middle States Association of Schools and Colleges
___the Southern Association of Schools and Colleges
___the North Central Association of Schools and Colleges
___the Northwest Association of Schools and Colleges
___the Western Association of Schools and Colleges

35. State in which college or university is located:

_____

36. The number of full and part-time students enrolled in your institution is:

____Under 1,000
____1,000-2,499
____2,500-4,999
____5,000-9,999
____10,000-19,999
____20,000-30,000
____Over 30,000

37. Your nursing program is:

____Generic only
____Generic and B.S.N. completion
____B.S.N. completion only
____External degree program
____Generic and Graduate
____B.S.N. Completion and Graduate
____Other (please identify_____)

38. The number of students in your generic program is:

____Under 50
____51-75
____76-100
____100-149
____Over 150

39. Generic students enter your program their:

_____Freshman year
_____Sophomore year
_____Junior year

40. Your programs' conceptual framework is based upon:

____Adaptation
____General Systems
____Developmental
____Integrated
____Competency-based
____Caring (please specify the theorist)
  ____Orem
  ____Watson
  ____Leininger
  ____Gaut
  ____Bevis
  ____Rogers
____Other (please identify_____)

Part B: Respondent Information

41. Your position in this nursing program is:

____Chairperson, Dean, or Head of the nursing program
____Curriculum chairperson of the nursing program
____Other (please identify_____)

42. The number of years you have been employed by this nursing program is:

____Less than one year
____One to three years
____Four to seven years
____Seven to ten years
____Over ten years

43. The number of years you have been the curriculum chair or chair of the nursing program is:

____Less than one year
____One to three years
____Four to seven years
____Seven to ten years
____Over ten years

44. The number of years you have been a nurse educator is:

____Less than one year
____One to three years
____Four to seven years
____Seven to ten years
____Over ten years

45. Your highest educational degree earned is:

____Bachelors in Nursing
____Masters in Nursing
____Masters in other field
____Doctorate in Nursing
____Doctorate in other field (please identify_____)
____Other (please identify_____)

46. Are you undergoing NLN accreditation next year?

____yes
____no

Thank you for your participation.
If you have a published outcomes assessment plan please enclose.

Please mail the questionnaire in the attached envelope to:

Research Institute for Studies in Education
College of Education
Iowa State University
Ames, Iowa 50011

Post Card Reminder

Recently you were mailed a questionnaire seeking your thoughts and opinions on outcomes assessment in nursing education. All N.L.N. accredited baccalaureate programs were mailed the questionnaire.

If you have already completed and returned the questionnaire to me please accept my sincere thanks. If not, please do so as quickly as possible, your opinion is important. If by some chance you did not receive the questionnaire, or it was misplaced, please call me at 407-994-2595 and I will mail you one today. Thank you for your help in this research project.

Sincerely,

Beth King, R.N., M.S.
Doctoral Candidate
Iowa State University
Ames, Iowa

Follow-up Cover Letter

May 12, 1992

Chairperson's Name
Name and Address of Program

Dear Chairperson's name:

Recently I sent you a questionnaire which focused on two current movements in nursing education: outcomes assessment and the caring curriculum. The data collected from this survey will be used for my dissertation. Since I have not received your questionnaire, I am sending you another one to complete. Your opinion is important to this study.

I would appreciate it if the chairperson of your curriculum committee, or yourself if he or she is unavailable, would voluntarily answer the attached questionnaire. All responses will remain confidential and will be destroyed upon completion of the study. A self addressed stamped envelope is enclosed for the return of the questionnaire, which is coded for mailing purposes only. Please return the completed questionnaire by May 22, 1992.

If you have already completed the questionnaire, thank you. If you have not, please share with me your knowledge and perception of the outcomes movement in nursing education.
If you have any questions please call me at 407-994-2595.
Thank you for your time, participation, and assistance.

Sincerely,

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